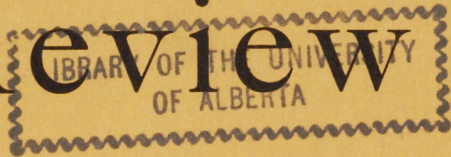


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MAY 13TH

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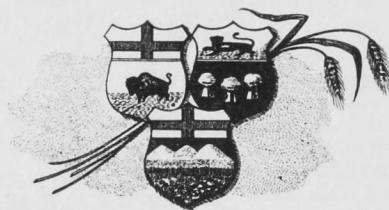
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SURGERY

Edited by S. S. Peikoff, M.D.

Transthoracic Esophageal Surgery*

Charles B. Puestow, M.D., F.A.C.S., Chicago

Clinical Professor of Surgery, University of Illinois College of Medicine

Chief of Surgical Service, Veterans Administration Hospital, Hines

"In 1936 a very well-known American surgeon wrote that cancer of the oesophagus was a lesion that was beyond the realm of surgical therapy, and then intimated that it would probably always remain so. In recent years, we have learned a great deal about the oesophagus, both in its diagnosis and in its treatment. It is an organ which is now accessible to us, for almost any of its diseases. It has become accessible because of advances, not in surgery, alone, but in many of your odd specialties, in the fields of medical care. The anaesthesiologists have probably contributed as much if not more, than the surgeons have. I think our increased knowledge of nutrition and its importance to surgery is the biggest advancement that has been made in surgery in the past 10 years, and has enabled us to do things to surgical patients that we could not do in the past, because of our ability to build them up in advance, and to maintain their nutrition post-operatively at a time when they are unable to assimilate nourishment by mouth. Our increased use of blood and the increased understanding of its various reactions and groupings has enabled us to use this medium freely and in large amounts so that we can do types of surgery in which there is a tremendous amount of blood loss, and replace it without danger to the patient. And, of course, the discovery and increased knowledge of the antibiotics has also made the mediastinum a much more accessible portion of the body. I put the antibiotics last, because I think too much emphasis has been placed upon them, and too much faith has been put in them; and the care of the patient, their nutritional state and meticulous surgical technique, still are more important to this type of surgery, than the antibiotics themselves. In the past few years we have been able to resect the oesophagus from many conditions. I'm going to go a little into the technique of it; I wish first, however, to say a few words about the pre-operative care of these patients. It is amazing to me that we can do the extensive work that is necessary in oesophageal resections, and have so

little reaction post-operatively, if the nutritional state of the patient is good, and if we give them proper pre-operative treatment. They are bad risk patients when they are a poor risk from a nutritional point of view, and with our increased knowledge of the proper pre-operative care, we are able to do much of the work that we could not do in the past.

The approach to the oesophagus is a matter of the individual desire of the surgeon. We approach most of the oesophagus through the bed of the 7th rib. If we are going to go above the arch of the aorta, we will divide the 5th and 6th ribs posteriorly, so that we have access to the entire intra-thoracic oesophagus as well as to the abdominal contents through the diaphragm. Some surgeons prefer to approach the lower oesophagus through the 8th or 9th rib, even for high resection, and then resect the 4th rib to make a high anastomosis, but that prolongs the operation, and although the procedure is facilitated a good deal by the approach, the added trauma and time to the patient, I think, is rather hazardous and we can do what we wish through the bed of the 7th rib. Now, the first slide—This is the line of incision that is used for this type of surgery. I'm not going into all the technical details of the operative work, but will outline the main principle of it, the incision that is used, and with a wide spreading of the ribs, we have access to the entire thoracic contents, and can divide the diaphragm and reach all of the abdominal contents. The oesophagus can be readily freed from its bed, and separated from the aorta and can be freed from behind the arch. Unfortunately, when dealing with cancer, many of the lesions are located in this area, and become extended into the aorta, which makes the separation rather difficult. Then by separating the oesophagus above the arch, we can carry out a resection all the way up to the neck, and remove as much of the stomach as we wish. It's rather interesting that although anatomy is a very old subject, we have known a good deal of it for many years, it has only been in very recent years that we have recognized the fact that the stomach is a mobile organ, that can be freed from the abdomen and brought up, if we wish, under the clavicle and high up into the neck. And because of that mobility, and because of its vascularity, which I'll go into in a minute, we are able to mobilize this structure and place it pretty much where we wish.

* Presented at the Sectional Meeting of the American College of Surgeons, Winnipeg, Man., April 4th, 1950.

Here is the stomach brought up into the chest, with the anastomosis high up under the clavicle, and anterior to the arch of the aorta. We used to believe that the oesophagus had an inadequate blood supply, and that it could not be mobilized without interfering with its viability. We know now that we can free the entire oesophagus and drop it back in the bed, and its viability is not in any way interfered with. There are two technical points in the operation, that I prefer, and I would like to mention them because I do believe they do facilitate the post-operative care as well as the operation. Some of the men, particularly Sweet, are advocating that a button of the stomach be removed, and there is a great deal of fear of stenosis at the site of the anastomosis. We make a linear incision, and make a two-way anastomosis, making it as large as possible, and to date we have not had to dilate the site of anastomosis in any of our patients. We also use a Lawson-Abbott tube, which has the feeding end extending down into the intestine, and the suction portion in the stomach. I believe this is important, to keep the stomach deflated and at the same time to be able to give the patient his post-operative nourishment almost immediately after operation. There has been fear expressed that the presence of the tube would cause erosion at the site of anastomosis, and leakage. We have not found that to be true, and when we have had leakage, we have not felt that the tube contributed to it. The section of the vagus nerves which is necessary in sectioning the oesophagus causes a gastric retention, and the distension of the stomach which complicates the post-operative recovery and for that reason, we think it most important that the stomach be kept deflated. This in general, is the principle of the type of high resection that is carried out for certain high oesophageal lesions, and as I say, if necessary, we can bring the stomach out above the clavicle, and into the neck, for cervical lesions. I'm not going to talk much about cervical lesions, they are difficult problems to handle, but I do wish to go into those conditions of the thoracic portion of the oesophagus which we run into quite frequently. Next slide, please. However, again I do want to mention the blood supply to the stomach. As you know, the stomach receives its supply from the right gastric and right gastro-epiploic, the left gastro-epiploic, the vasa-brevia and the left gastric artery. It is rather amazing that all of the arteries on the left can be divided, and yet the viability of the stomach is unaltered. This is a drawing of a patient, however, who had in addition to the division of the left vessels, a division of the right gastro-epiploic at the time that a gastrostomy was done to feed a patient with a stricture. This left the patient only with his right gastric artery supplying the entire

stomach. Cyanosis of this half of the stomach developed, he did develop a leak at his suture line, which, however, after adequate drainage healed spontaneously, and that patient is alive and well today. I mention that, because of the fact that if a gastrostomy is necessary before oesophageal surgery is carried out, it should be so placed that it does not interfere with the vessels of either the greater or the lesser curvature. The success of trans-thoracic surgery depends more upon the surgical team, and the surgeon's assistants than it does upon the surgeon himself. It is the post-operative care which is so important to the recovery of these patients. A rather prominent Chicago surgeon came to me not long ago, and told me that he had resected 10 oesophaguses, that all patients had died post-operatively, and he thought it ought to be written to discourage this type of surgery. I told him that the 10 died, not because of his technique, but because of inadequate post-operative care.

Post-operative Care

There are a few things in the post-operative regime which I believe are most important, and this I would like to emphasize now. The greatest cause of post-operative difficulty is pulmonary, and if we are not alert in keeping our patients active, in preventing secretions from accumulating in the lungs, we are going to get atelectasis, pneumonia and death. So, we have this post-operative routine. The Stirup regime simply means that we must keep our patients active at all times, have them move from side to side, get them up as early as possible, keep them from lying quiet and developing pulmonary complications. Aspiration of the trachea and of the bronchi is most important, and here, the bronchoscopist is of a great deal of value to us. We don't wait until the patient develops an atelectasis before we have his lungs aspirated; they are done immediately after operation, and the anaesthesiologist and bronchoscopist work with us very carefully to watch these patients and aspirate their bronchi whenever there is the slightest indication for it. Some surgeons have recommended that a routine tracheotomy be performed so that a catheter can be slipped into the trachea frequently by a nurse or anyone else, to keep it constantly aspirated. We have not found that to be necessary, and we believe it is an added procedure which adds to the shock and risk to the patient. Another error that is frequently performed, is the over-administration of opiates and sedatives of various kinds. They depress respiration, they tend to keep the patient quiet, they suppress coughing, and again, stimulate the development of pulmonary complications. Oxygen has a very definite place in the post-operative care of these patients, but it likewise can be overdone. If a patient is not cyanotic,

if there is no evidence of oxygen want, we believe that oxygen should not be used, because it tends to dry the secretions in the bronchi, and stimulates the development of atelectasis. The fluid and nutritional balance should be carefully worked out, and I think we too often err on the side of flooding these patients rather than giving them an inadequate amount of fluid. With a disturbance to the heart and to circulation, and with a tendency for them to develop pulmonary oedema, we must be careful not to waterlog these patients. Antibiotics are important. We say they are not the most important part of the regime, but they do minimize the possible danger of infection, and that is particularly important here, where we cannot help but contaminate the mediastinum. And the recovery routine, which is a routine worked out on our recovery ward (all of these patients are handled on a recovery ward) every member of the team knows the routine and his own part in it, and by being alert at all times, will avoid complications which might otherwise develop.

Indications

There are a number of conditions for which we now attack the oesophagus. One of these is (a) **stricture**. These are becoming more frequently recognized. The oesophagus has been a rather neglected or forgotten organ because of its inaccessibility. We are finding now that many patients with peptic ulcers also have inflammatory lesions and ulcerations in the oesophagus. Some of these go on to stricture formation, which may be dilated, but sometimes need to be resected. And then, of course, we frequently run into the individual who becomes despondent, and drinks lye or some other caustic, and gets a stricture which frequently cannot be dilated, and must be surgically treated. It is rather interesting, in our series of patients with lye strictures, all of those of the white race drank their lye with suicide in mind; all those of the colored race mistook it for gin. It shows little difference in the ferocity of the two races. I'd like to show you an example of the type of surgery carried out for these lye strictures. Here is a lesion which is high above the clavicles, and a very extensive stricture throughout the oesophagus from this portion on. It was necessary to remove the entire oesophagus from the point of this stricture down to the diaphragm. There's one discouraging point about oesophageal surgery, it's a very contractive organ; and you take out the oesophagus all way from the clavicle down to the diaphragm, you've got a nice long oesophagus, and you put it down and it contracts down to about 5 or 6 inches, and you wonder where the rest of it is; but this is an entire oesophagus, a stricture of the oesophagus, and as you see, the lumen is so very narrow that this could not be dilated, and you have extensive fibrosis around it. These are

more difficult to free in most instances, than malignant lesions of the oesophagus. Here is the patient with the stomach in the chest, here you see the site of anastomosis above the clavicles; this was taken after the administration of barium with the patient in the Trendelenburg position so that we could show you the upper portion of the stomach. These stomachs tend to empty very rapidly, and it's hard to get a good picture of the entire stomach unless you do put them in the Trendelenburg position. You may wonder what this does to the patient to have their stomach up in the chest. The only complaint that these people have, is that they have a feeling of fullness and a very mild indigestion for 10 or 15 minutes after eating. They like to sit down and rest for a few minutes. I think if we all would do that, we would not have nearly as great a problem of peptic ulcer as we do at the present time. Next please. Here is what happens to the stomach if a tube is not left in place, and you can see how tremendously dilated this becomes in the early stage, when we are trying to avoid pulmonary complications, to have the lung compressed and a tremendously dilated stomach adds to the hazard of the patient. And here is the position of the stomach as shown in a right view, lying posterior along the spine, and behind the lung. The compression, even of a full stomach, of the lung on the left side, only constitutes a comparatively small percentage of the entire lung, and does not interfere with respiratory function. So much for strictures, both due to inflammatory lesions and due to the ingestion of lye.

(b) **Carcinoma** of the oesophagus is being recognized more frequently, and we know is a very distressing disease, because it soon obstructs the oesophagus and the patient not only suffers from his cancer, but he suffers from the inability to eat, from starvation from hunger, which is an extremely distressing thing. And there is no operation which gives as little satisfaction as a gastrostomy. For a patient who has only a few weeks or months of life remaining, to have to inject his food into his stomach through a gastrostomy, is not a very hopeful outlook. And the average length of life following gastrostomy is only 3 months, so that operation has very little to offer. I mention this because, in the end, I will show you the results of our treatment of cancer and they in turn, are not too encouraging. But we do enable patients by our resections, to eat and to be comfortable, to avoid that terrible hunger, and to get along much better for a little longer period of time, and to be able to enjoy their food until they eventually die from their metastases. Unfortunately, this is the first picture that we see, too often. Here is an inoperable carcinoma, lying behind the arch of the aorta, in

a patient who had had symptoms for almost 18 months before he was finally sent in for surgery. This is partly the fault of the patient, and partly the fault of the doctor. This patient was treated by a very well-known endoscopist. Radium was inserted into the tumor, and finally, when he was totally obstructed, he was sent in for surgery. We explored this patient and could not remove the lesion. I have put it on, to decry this type of treatment, because if we are going to do anything for these patients, we've got to get them early. Here is a carcinoma which is quite extensive. You can see the moth-eaten appearance of the oesophagus from a very high point, on down for a distance of several inches. Yet, we were able to resect this patient, bring his stomach up into his chest, and he lived for a period of 10 months, quite comfortably. Here is the stomach well up into the chest, it was anastomosed above the arch of the aorta, and this patient went on, as I say, for a number of months. Here is the carcinoma removed from this patient. Here's the lower end of the oesophagus, and the upper portion of the stomach, the carcinoma which extended up above the arch, and the oesophagus was resected above it. At the time we operated this patient, he had extension into his aorta, and extension into the hilus of the lung, but we resected him knowing it was a palliative procedure, to give him added comfort and a few months more of life. Here is another carcinoma, of the mid-oesophagus, which was removed, a rather large carcinoma, and yet this patient recovered and survived for quite a number of months before he eventually died of his metastases. These are the extensive lesions that we try to avoid, but in lesions in patient for whom we do have something to offer. Here is the oesophagus of another patient who was permitted to go on until his lesion became inoperable. We explored this patient, his carcinoma had invaded so deeply into the aorta, that it could not be freed. The patient subsequently died from a rupture of his aorta into the oesophagus, through the site of the carcinoma. Here is a very large one. It is the largest carcinoma, I believe, that we have removed. It was approximately four inches in length, and about 2½ inches in diameter, and yet it had remained fairly local. By removing the carcinoma, part of his diaphragm and some of the adjacent structures, we gave this patient a number of added months of life and comfort. The encouraging lesions, and the ones that are by far the easiest to handle, are the low-lying oesophageal carcinomas. Here is one which fortunately produced a total obstruction, when the lesion was quite small. We were able to resect the oesophagus, the lower portion of the oesophagus and the upper portion of the stomach, and remove a comparatively small carcinoma, and bring the

stomach up into the chest, and make a high anastomosis. This patient, I am confident, is cured. We carried out this operation 2 years ago, we recently studied him, and he has no evidence of recurrence. So that for this disease which in the past has been a totally hopeless situation, we have a great deal to offer from the point of view of comfort to the patient, and if we can have the patient recognized early enough, we will have a good deal to offer from the point of view of cure, certainly the percentage, I believe in time, will be equal to if not better than the rate of cure of the cancer of the stomach. Another lesion in which oesophageal surgery is of some value is (c) **oesophageal varices** in which we are having profuse haemorrhage. Resection of the upper portion of the stomach and the lower oesophagus is not the operation of choice for oesophageal varices, because we are not doing anything to cure the portal hypertension. We prefer to do a shunt operation, either porto-caval fistula or a spleno-renal anastomosis. But too frequently these patients have had a splenectomy because of their portal hypertension, and the splenic vein is destroyed. And then an attempt is made to anastomose the portal vein to the inferior vena cava. That, however, is unsuccessful in a high percentage of cases. If the patient continues to bleed, we can resect his lower oesophagus and upper portion of the stomach, and they are likely to be freed of their bleeding for a long period of time. Here is an oesophagus showing the oesophageal varices by X-ray. This shows the patient after his resection, with the anastomosis just below the arch of the aorta. This patient has gone on now for a considerable period of time, without recurrence of haemorrhage. As I say, it is not the ideal operation, but it will suffice and will relieve the bleeding, we hope permanently in some patients, and often for a considerable period of time and has a considerable amount to offer when other procedures cannot be carried out. And the last benign condition which I wish to mention is (d) **diverticula** of the oesophagus. Of course, those in the neck, in the pharynx, are approached through the neck, but when we find one which is down 4 inches above the diaphragm, as this particular lesion is, we can approach it through the 7th or 8th rib, and remove it as we would any other oesophageal diverticulum, and these patients survive with very little surgical risk and with very little post-operative morbidity. I've tried to show you some of the things that we are doing for various oesophageal lesions, the developments that have taken place in recent years, and now I'm going to show you the discouraging part of this whole picture, and that is our end results. In one hospital, in the past 3 years, we have operated 32 carcinomas of the oesophagus, 16 could

not be resected; they were inoperable, and 14 of those 16 patients are dead, two are terminal at the present time, and will be dead within the next month. Eleven of those 16 were dead in less than 3 months. However, had a gastrostomy been done on those patients, they would have been dead within that period of time as well. Of the 16 that we resected, 5 died post-operatively. Three lived for 3 months, 2 lived for 6 months, 2 lived over a year, 2 are still alive, one two years later, one 6 months later. So we have a salvage which is not high, but we also have a group of patients who had 6 months, or 9 months, or a year or 18 months of far greater comfort than they would have had, had we not resected their lesions. There were 4 patients with stricture, 1 died post-operatively, 3 are alive and well over 3 years, and,

of course, they have a normal life expectancy. We've resected 2 for varices, those are both alive, the period is a little longer than this now, neither have had any recurrence of haemorrhage. I have not included in this our series of diverticula, but they likewise have all survived the operation. So that we can approach the oesophagus with the advent of our knowledge of good pre- and post-operative care, we can do it with a steadily diminishing mortality, our mortality at the present time is about 20% for our entire series; and yet we know that we would have 100% mortality if we did not operate these patients. And I think as time goes on, and we get these patients earlier, we are going to have a cure rate in cancer of the oesophagus, that would be better than our cure rate of cancer of the stomach. Thank you.

CANCER

Edited by D. W. Penner, M.D.

Treatment Facilities for Cancer Patients

There are three principles underlying good medical care for cancer patients:

Early and accurate diagnosis

Adequate treatment

Careful follow-up control.

With these facts there can be no serious argument but let us examine the first two of these principles a little more carefully.

The responsibility for early diagnosis lies with the patient and with the doctor to whom the patient first goes for advice. Case records show that delay in diagnosis is not always the fault of the patient and for this reason professional education is just as important as lay education.

A general practitioner may care for some 2,000 people and in this group an average of only four new cases of cancer will arise each year. The practitioner therefore cannot be expected on the basis of experience in his own practice, to be an authority on the diagnosis and treatment of cancer. Nor do practitioners pretend to be such authorities. Their desire is to recognize the presenting symptoms and signs of cancer, to carry out further tests to confirm the diagnosis or to refer the patient to some centre where these and other tests can be done and where the patient may receive the benefits of the experience of those who are seeing cancer patients from day to day.

The next step of course is treatment and one of several decisions may be reached. Surgery may be advised, radiotherapy may be advised, a combination of surgery and radiotherapy may be preferable or finally, the only measures to be adopted will be those which will keep the patient as free from symptoms as possible for the remaining

time he has to live. This, in some forms of cancer such as of the prostate gland, may be for five years and more.

It will be appreciated that the best advice as to the method of treatment for the individual care of cancer will come from those who, through clinical experience, have seen enough cases of that particular type of cancer to be familiar with the course of the disease and its response to treatment.

There is a tendency at the present time on the part of well-meaning citizens of some of our smaller cities and towns to demand that all cancer treatment facilities be set up in their particular community. In the best interests of the cancer patient these demands can not be medically justified—nor can they be justified economically.

A population of 20,000 people does not produce a sufficient number of cases to allow for a large experience in the handling of cancer patients and does not produce a sufficient number of cases of all types to justify the setting up of the expensive radiotherapy equipment necessary for treatment of special cases, to say nothing of the trained personnel required to operate this equipment.

The following figures support such arguments. The same population of 20,000 will have about 50 new cases of cancer per year. Certain types of cancer such as of the skin will be more common than others. Nevertheless, it will take months or years to gain an experience with even as few as ten cases of any given type of cancer. Ten cases of cancer of the skin might be expected to occur in 15 months, ten of the breast in 16 months, ten of the uterus in 2 years, of the bladder 5 years, the lung 7 years, the lip 8 years, the larynx 16 years, and ten cases of brain tumor in 25 years.

Local pride in matters of medical care must give way to a reasonable understanding of the necessity for the concentration of all cancer treatment facilities only in those centres which draw from populations of large size.

GYNECOLOGY

Edited by R. Lyons, B.A., M.R.C.S., L.R.C.P., M.R.C.O.G.

Psychosomatic Considerations in Gynecology

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The concept of psychosomatic medicine is not new. Philosophical and literary works since the beginning of history indicate that the influence of emotions on organ function, and thus on general health, is a matter of common knowledge. Scientific students of medicine, however, having set up rigid objective criteria for the classification of disease, have been loath to attribute to emotional values similar or equal status with microscopic and test-tube techniques. This is because we cannot trust our own judgment if part of the evidence on which we base a conclusion consists of human feelings and actions. It is to stabilize our own emotions, and to keep our judgment cold and untinged with feeling that we put greater credence in mechanical methods. Of course this has been necessary to standardize scientific techniques, but it is grasping only a portion of the total process of disease. Aberrations in behaviour of one organ should be regarded in relation to the behaviour of the individual. For example, a woman at the menopause, with various evidence of emotional and vasomotor instability, was given oestrogens. These produced excessive bleeding for which a hysterectomy was performed. Then signs of hypothyroidism were noted, for which thyroid extract was prescribed. Then hyperthyroidism ensued, for which a thyroidectomy was performed. As the symptoms continued, the doctor then sent the patient to a psychiatrist with this cryptic remark, "I never could handle these psychosomatic cases anyway."

Two factors in our present stage of medical knowledge have focussed attention on the results of emotion on organ function. One is the fact that large numbers of human lives have been rendered free from periodic illness by specific antibiotic therapy. Acute and chronic cases of bacterial disease are rapidly on the decrease. Yet acutely and particularly chronically ill people seem to be on the increase, if one can judge from the constant patient load in clinics and doctors' offices. One can argue that, as the life span has increased, degenerative disorders are more in evidence; but even so, the emphasis is shifting more and more to the realization that disorders which are neither of infective nor of degenerative origin, namely, peptic ulcer, migraine, rheumatoid arthritis, colitis and hypertension, and some cases of asthma

and hay fever, are responsible for much ill health and are not satisfactorily treated unless one takes into account the body's adaptive mechanisms to stress. Also responsible for much ill health are the so-called "functional" disorders of organs in which there seems to be an obvious relation to life situations and daily stress.

The second factor is the fundamental work done by Freud and his followers in relation to the expression of emotions as organ symptoms. Because psychosomatic developments are mainly due to psychoanalytic research, it might be profitable briefly to outline this historical sequence. Then we can proceed to the consideration of gynecological applications of general principles.

Freud startled the civilized world by the enunciation of a theory of man's thinking and actions based on a psychosexual concept of the early development of the individual. This meaning of sexual is in the large sense, including affectionate feelings of all degrees, and for both sexes, as well as lust. The functioning of the human mind he postulated as resulting from the interaction of mental processes with different qualities of awareness. These varieties of awareness were grouped as conscious, preconscious and unconscious. Conscious thinking we understand. It is subject to our voluntary control. The preconscious area of our minds contains forgotten thoughts and ideas which we can recall at will, in response to an appropriate stimulus. The unconscious area of our minds, however, contains memories of ideas related to experiences which happened so long ago that we cannot recall them at will. It also contains memories of experiences which would be so painful to recall because of their potentiality for harm to our safety, that certain mental guards are set up to prevent their recall. These are the so-called repressed or dissociated thoughts and feelings which are incompatible with one's own standards and with the standards of society at large. Were they not repressed, they would create anxiety or anti-social acts. However, unknown to the individual, these repressed experiences influence his thoughts and actions. For example, at times they may lead to remarks with no meaning, slips of the tongue, changes in facial expression, alterations in muscle tonus, etc. Because the individual is not aware of their existence or meaning, he cannot combat or solve them consciously. However, in the deeper portions of his mind, his adaptive mechanisms are continually at work to keep them in control. This control may be ineffective, either because the repressed material is so painful, or because the adaptive mechanisms are inadequate.

If the control be ineffective this is bound to show in some way. It may be as an emotional instability such as overt anxiety, hysterical manifestations, temper tantrums, aggressive acts and anti-social behaviour. The aberrant feelings or actions which show by objective signs have an effect on the individual's environment and on society. In other cases, the outlet is in terms of aberration in function of internal organs through the autonomic nervous system. The existence of a nervous indigestion, dysmenorrhoea, or migraine, for example, can have the same psychological etiology as an act of aggression. However, somatic symptoms are not as effective as acts of aggression, because they do not solve the external situation, and the reason for their existence is hidden from the conscious mind of the sufferer. For example, if a person laughs or cries, he is usually able to state the emotion which produced this reaction. The patient with nervous indigestion, however, is usually unable to recognize the emotional conflict which gives rise to the disorder of autonomic control of his digestive function. Very few people are independent or courageous enough to attack their difficulties with conscious aggression in our society. The substitute is a defense reaction which is inefficient in a direct way, but which produces certain compensations to alleviate the patient's emotional distress because he gains social attention from being ill, and because he can shift the responsibility of treating his symptoms from himself to a doctor. Defense mechanisms are, of course, normal acquisitions during the course of development from infancy on, and they are the price we pay for our civilization. When these mechanisms do not entail unhealthy forms of feeling and behaviour, the integrity of the personality is still preserved. It is only when these defenses fail that breaks in the system show by what we know as psychosomatic symptoms. A normal personality has been described as one who is free from symptoms, unhampered by mental conflict, has a satisfactory working capacity and can love someone other than himself. This does not mean that normal personalities have no mental conflicts. It is just that they have learned to handle them without being so handicapped that they cannot lead constructive and efficient lives. The difference between healthy, neurotic and psychotic people is more quantitative than qualitative.

Now Freud was the first investigator to apply to the practice of medicine the psychological postulates that the mechanisms of repression and dissociation are functions of the human mind in keeping the whole body economy stable and capable of purposeful and constructive action. He also postulated that inadequate expression or solution of emotion produces conflict. He went further and

postulated that conflicts excluded from consciousness create a permanent tension and that this tension may occasion persistent or recurrent disturbances of organic function. So far, one may or may not accept as fallible these postulates. There is another postulate, however, which naturally follows in the hypothesis that does fit clinical observation; and that is the concept of regression. This refers to immature or infantile reactions which are displayed by people who are faced with insoluble conflicts that result in overwhelming anxiety and no constructive action. This Freud explains as a retreat of the ego from conscious adult behaviour to a more primitive level, and is a most useful concept practically. Just here, we should consider the different parts of the personality as defined by Freud. The ego is the conscious mind which mediates thought and action through the cortex. The superego is the part of the mind which acts as a censor or conscience, and is acquired by social development and the learning of the ethical and civilized behaviour of the race. The id is the deepest part of the personality, which contains the inherited instincts of the race, love and aggression, and is the seat of the libido. The id inhabits the unconscious, and physiologically is pictured as operating through the hypothalamus by autonomic influence on the cortex or conscious ego. The ego is in command of our decisions and actions, discriminating among the thoughts and feeling which are expressed in speech and action.

Freud therefore developed the theory and practice of psychoanalysis as a medically oriented psychology, founded on the psychobiological development of the individual. He introduced the concept of the libido as representing the total energy reservoir of the individual, with the basic instinctual drives of love and aggression. Libido analysis then, or traditional psychoanalysis, is designed to probe to the depths of the instinctual life, to uncover thwarting in early life, to bring these conflicts out to consciousness so that the patient can look at them consciously and rationally, and work out a more appropriate adult type of adjustment in his life. This technique of psychoanalysis was designed for application to the psychoneuroses, and it in turn had followed the technique of hypnosis which Freud had first used in hysterical patients.

Here then are the roots of psychosomatic medicine. Some people also maintain that they are the roots of human philosophy and religion. It is a question too close to the mystery of life for us to be able to decide whether Freud and his co-workers were such sincere and keen observers of human nature that they glimpsed the deep truth of the human mind; or whether by analogy they have constructed an expedient hypothesis which

works in somewhat the same way as does the hypothesis of immunity in the treatment of allergies.

For practical purposes in medical practice, however, the technique of formal psychoanalysis is inefficient. It is lengthy and costly. It takes from one to two years. It consists of a living through of the past life in detail, with the patient describing events verbally and re-living the emotional experiences connected with them. The analyst listens and then interprets the patient's emotional reaction to him. The important element in this therapy is the rapport between the examiner and the patient. He is sympathetic and patient in listening, but also detached and tolerant and voices no judgment. The examiner himself must first be analyzed so that he will be able to distinguish between his own and the patient's emotional conflicts. This technique puts the patient at peace with his past conflicts, but one criticism of the method is that in the meantime life goes on, and the emphasis is not properly placed on the patient's technique of adjustment to his present difficulties.

Modern modifications in this technique have led to the psychosomatic method of character and personality analysis. This technique is designed to bridge the gap between the mystical concepts of Freud and the physiological language of organs. Emphasis is not placed on an analysis of the libido, but rather on the manner in which the patient's defenses against his conflicts have found expression in his habits of feeling, thought and action, and have warped or colored his personality. Everything we do and feel and think can be thought of as personality functions. Also everything we do and feel and think, in some way is related to physiological functioning, from the cerebral cortex down, or the hands and feet up. From this point of view, in gynecology as in other specialties, the aim is to interpret organ function in its relation to the total physiology involving the emotional reactions.

Walther has given a comprehensive introduction to psychosomatic problems in gynecology in the handbook by Halban and Seitz. Since the time of Hippocrates and Galen, physicians have held the idea that diseased genital organs are the sedes morbi for the manifold hysterical disturbances of bodily function. Even though in the eighteenth century, castration failed to cure these disorders, the idea remained ingrained. All that resulted was that the sedes morbi was transferred from the ovary to the uterus. Anomalies of uterine position, ulceration of the external os, the so-called "chronic metritis" uterus were considered the sedes morbi of hysteria. As late as 1893 it was taught that "it is preeminently diseases of the hystera, of the uterus and adnexae, which lead to

the most pronounced and frequent symptoms of hysteria" (Kustner). In 1902, Kroenig was the first to stress the importance of functional nervous disorders in gynecological diagnosis and therapy. He recognized as purely psychogenic certain hyperesthesias and emphasized the frequent occurrence of psychogenic pruritis vulvae and mentioned the psychogenic sensation of prolapse without prolapse. However, it was not until later, 1919, that similar observations were again reported by Grafe and Mathes. From 1901 to 1903, meetings of many gynecological societies were given over to the dispute. Previous to 1904, many gynecologists favoured the new concept of psychogenesis of many genital disorders, although the nature of these disturbances remained obscure. The majority did not agree with Kroenig that disturbances might be caused solely by psychic processes, thinking instead that they resulted from not yet perceptible somatic changes in either central or peripheral nervous system. E. Meyer, a neurologist in 1904, helped to make comprehensible to gynecologists the purely psychic element in psychically conditioned disturbances, stressing the importance of the emotions. During the first decade of the 20th century, this concept gained ground and psychically conditioned dysmenorrhoea, in particular, came to be more generally accepted.

Psychiatric literature gives examples of provocative conclusions in psychotherapeutic investigation of disturbances of menstruation. It is a well-known fact that in psychotics there is a remarkably high percentage of anomalies of menstruation. Amenorrhoea is a common accompaniment of the onset of a schizophrenic episode in adolescence. It is also commonly observed in young girls who move away from home to go to college or to enter hospital training as nurses. It is also a common early sign of incipient tuberculosis. Now that the mechanisms of the endocrines and autonomic nervous system are being elucidated via ACTH, one wonders whether this type of amenorrhoea is not one of the signs of the total complicated adaptation of the body to shock or threat. The threat may be the tubercle bacillus, or loss of security on leaving home. Psychoanalysts, such as Mayer and Allers, suggest that amenorrhoea may be a masculinity complex or a stubborn and deep-seated refusal of the girl to accept the feminine role in life. This may be based on a resentment of her mother, or on early emotional experiences which have failed to enhance the feminine role with prestige and desirability. It is significant that in anorexia nervosa, where amenorrhoea is present, there has usually been demonstrated an underlying mother-daughter conflict. Similarly in men with sexual difficulties, frequently a father-son conflict can be demonstrated. The sexual development of the child is

important to understand in this connection. In the beginning, the child loves only himself and he is in a position of receiving love and affection as well as physical care from adults in his environment. He cannot be a giving person until he learns to respond, and to give as well as receive affection. He first gives to them who give to him. If he does not receive enough for his primary needs, he cannot give, and thus, to be a co-operative organism, a balance must be maintained between his absorption and his production. When this balance is even, he is contented. Gradually as he matures emotionally, he learns to transfer love and interest from himself to others around him, and he grows out of his narcissistic stage. As he grows older, he learns to behave as an adult, using his parents as patterns. It is mentally healthy for a girl to copy her mother and a boy to copy his father. Of course, they both have a period of revolt at adolescence, in an attempt to establish their own independence. But after this, by the process called identification, the parent of the same sex sets the standard for the character development of the child. If the parent, for example, the mother, feels that the daughter is a rival, or a nuisance, or rejects her in subtle or overt ways, instead of accepting her warmly and wholeheartedly, a resistance grows up in the mind of the daughter, which may show itself physiologically as amenorrhoea. If the parents are incompatible, for example if the father mistreats the mother, the daughter may experience deep disgust at the ignominious role of womanhood as exemplified by her mother's unfortunate life. This may result in a rejection of the feminine role for herself and may lead to menstrual disturbances, or failure to adjust sexually after marriage. She will have a resentment of men, because her father was not an admirable example of manhood, and thus be unable to achieve sexual satisfaction with a male herself. Before marriage, the only husband a girl has been well acquainted with is her mother's husband. This is a common example of the emotional roots of frigidity. Emotional maturity demands the ability to amalgamate feelings of emotional tenderness and sexual attraction toward one and the same person. This ability depends on the healthy development of the emotions from childhood on, and identification with an admirable parent of the same sex, or a good parent substitute. Rarely can one superficial emotional episode be blamed as the single cause of failure to adjust sexually. A primary requisite for this development is that the parents be sexually adjusted, happy, and feel mutual respect for each other. They should represent a stable and self-contained unity. The child, of either sex, should never be demanded emotionally to take sides with one parent against the other. This is sure to confuse him or her in

his idea of self-identity when the time comes to assume an adult role. Signs of this conflict may show as dysmenorrhoea, amenorrhoea or menorrhagia, in the absence of organic disease. The literature on hypnosis bears out the fact that emotion can vary endocrine function. For example, both Schindler and Heyer report cases of postponement of the date of menstruation in artists, by hypnosis. Eisler has also pointed out how amenorrhoea for nine months may exist as an unconscious pregnancy phantasy. In 1909 Walther was the first to describe psychic origin of vaginismus, which had previously been considered organic and treated as such. This is due to a fear and aversion of intercourse, and goes back, as already mentioned, to the early childhood development of the emotions. The writer recalls a case of extreme vaginismus who appeared to be a latent homosexual, unknown to herself of course. She had had repeated examinations under anaesthetic with no organic defect discovered, but was totally unable to have sexual relations with her husband, although both stated that they wished to have children. Two points suggested homosexuality—one was that she treated her husband with maternal tenderness rather than adult love, and her husband was in behaviour and habitus decidedly more feminine than masculine. Also the wife, under sodium amylal narcosis, revealed that the happiest period in her life had been while living with a woman friend, and while discussing this, she showed more signs of physiological relaxation than at any other time. She herself had no understanding of the mechanism of her attachment to her woman friend; it was not a case of overt homosexuality and the friend had later married happily. This case was classed as vaginismus due to incomplete feminine emotional development, based on an emotionally cold childhood and fear of the adult sexual role. This couple were advised to adopt a child.

Sterility is another subject about which psychoanalysts have made interesting observations. It is an old and widespread belief among women that orgasm is necessary for conception. There may be some scientific substantiation for this popular belief. Kehrer states that failure to have an orgasm leads to overfilling of the abdominal vascular and lymphatic systems, which in turn leads to more serious alterations interfering with conception. Amersback mentions a group of women who conceived after frigidity had been cured, and another group who do not conceive with their husbands with whom they are frigid, but by another man with whom they are not frigid. He reports the case of a sterile and frigid patient who conceived with surprising ease following hypnosis. Sellheim makes an assumption as to the theory of this sequence of events. He postulates

that psychic influences, associated with a vivid but unsatisfied desire for a child may stimulate the ovaries to pathological growth. It is possible that this may result in premature maturation of the follicles and discharge of the ova which are not yet ready for fertilization and there is consequent sterility. He thinks that the peculiar cases of first conception after fifteen or twenty years of married life can be explained in this way, in that a woman gradually becomes reconciled to her sterility, and this release of anxiety and tension removes the injurious influence on the follicular apparatus. He points out that the possibility of postponement of ovulation may be connected with changes in abdominal circulation due to emotional influences.

In assessing a case of sterility from the emotional standpoint, it is important to judge the personality type. Is the patient a warm-hearted, emotionally mature woman whose stated desire for children is accompanied by practical evidence that this is a true desire. Or is it only a vocalized wish without basis in her heart? For example, is she vain and egocentric, able to give love and attention only to herself in the way of clothes and personal adornments and elaborate housing equipment? If this is so, she has not developed beyond the narcissistic stage of childhood and she is emotionally unable to love anyone else but herself. Does she desire a child, not with the aim of being a good parent, but to be one of a group of women with social prestige because they can gossip about formulas and training? Is it too visionary to venture the suggestion that this type of egocentricity and emotional maldevelopment may be accompanied by altered physiology such as faulty ovulation?

There is hardly any type of alteration of menstrual function which has not received psychiatric notice. For example, Novak and Harnik describe four types of dysmenorrhoea—1. Intermittent labour-like pains with clots; 2. Pain from hyperemia or distention of the capsule occurring shortly before the onset of flow and subsiding with the flow; 3. Menstrual colic; 4. Membranous dysmenorrhoea. They find that menstrual colic is the most frequent form and is always of psychogenic origin. Psychotherapy is credited with bringing relief of menstrual difficulties such as pain, migraine, nausea, vomiting and fainting. Even fibromyomata have been attributed to emotional disturbances. Kehrer, a German gynecologist, although opposed to the basic Freudian concepts, has come to some startlingly similar conclusions by gynecological examination and observation. He states that fibroma and sterility are co-ordinate sequelae of the same fundamental condition; chronically disturbed psychosexuality, with resulting chronic disturbances in abdominal

blood and lymph distribution. He finds that women leading satisfactory sexual lives remain free from fibromata, whereas every patient with a fibroma has a history of chronic psychosexual disturbances. He finds furthermore, that from the size of the myoma and the degree of certain other accompanying manifestations of chronic sexual hyperemia, even the duration of the psychosexual disturbances can be judged with striking accuracy. Wengraf believes that it is possible to bring about the disappearance of a fibroma psychotherapeutically, under favourable circumstances; that is, shortly after its appearance, or to arrest its growth if the analyst discovers and eliminates the essential psychoneurotic disturbances. On the other hand, he states that it would be going too far to generalize on these results, and that he had also to record many failures. Doubtless some of this literature would have to be examined critically before one comes to a definite conclusion about these controversial points, but the nature of the claims gives us an inkling of the direction present thinking is taking on this subject.

Perhaps the most troublesome cases of emotional disturbances which the gynecologist meets are in the menopausal or involutional group. Fifty years ago, when castration was performed for hysteria, it was gradually recognized that the residual symptoms were not the result of castration on a physical basis. Similarly today, we know that the most troublesome symptoms are not primarily endocrine. Vasomotor symptoms can be controlled by oestrogens; symptoms of hypothyroidism can be controlled by thyroid extract; water retention can be relieved by diuretics; premature osteoporosis can be prevented or delayed by oestrogens or androgens; spastic constipation can be relieved by a smooth diet, antispasmodics and increased rest. But not one nor all of these measures can remove from the patient's mind the life-long dread that at her menopause she will "go the way her mother did" having to spend the rest of her life in an asylum. And not one nor all of these will restore to the patient the vital interests which disappeared from her life when her children grew beyond their daily need of her, or when her husband died, or when a daughter-in-law took over her household. Many women arrive at the menopause just as much unprepared for a psychological re-adjustment in their lives as are business and professional men who reach retirement. The big psychological adjustment at this period in women's lives is in terms of their goals. The traditionally feminine woman who has gained all her expression through her children's lives, even thereby sacrificing a good companionship with her husband, is assailed by a sense of futility and depression as it becomes apparent that her children are self-sufficient in their own lives. The

woman who has thrown herself into her children's lives as a substitute source of pleasure because of unsolved incompatibility with her husband, suddenly, at the menopause, finds herself alone, with her children gone, and the necessity presents itself of the parents adjusting to each other's personalities. In some cases, where they were married young, they have never made a good personality adjustment and the children have acted as buffers throughout the years. Then, literally in their fifties, they are living alone together for the first time in their lives. The coincidence of this problem at the time when the woman's adaptive mechanisms are not capable of taking on extra loads, can create sufficient stress to precipitate a severe depression. Obviously the treatment of this condition is not symptomatic or on endocrine level. Here is an example of such a case. This patient, in her middle fifties, developed a constant headache, coincident with the menopause, which became steadily more severe, so that she became sleepless and depressed. She had numerous types of medication, including oestrogens, thyroid extract, and even intravenous histamine, as well as having an exhaustive search made for allergic factors. She had spastic constipation, and a non-specific type of indigestion with flatulence and distension. An X-ray of the gall bladder revealed stones. She had never had colic. Her gall bladder was removed, and much to her dismay, after she had made an uneventful recovery from the operation, the headache persisted. Realizing that there appeared to be no organic treatment which would relieve the headache, she expressed suicidal ideas such as "if the operation did not cure the headache and I have to live as I have done for the last twelve years, I would rather be dead." The surgeon thereupon asked for a psychiatric consultation. On investigating this patient's personal history, it was found that there had never been a good personality adjustment between husband and wife. The wife, being an intelligent and strong-minded woman, had been able to control her resentment and inner loneliness through the years, gaining satisfaction and emotional expression in hard work and one extra activity after another. At the menopause, with all the children away from home, she was alone with her husband. At this juncture, headache developed and persisted, as a psychosomatic expression of chronic anxiety. This patient was restored to improved health by electro-shock therapy and psychotherapy. She still, however, is faced with the problem of the adjustment of her home life.

It may safely be said that exaggerated signs of anxiety at the menopause, whether as headache, urinary frequency, or backache, have their origin usually in long-standing defects in personality adjustment. The same is true for exaggerated

anxieties and depressions in pregnancy and in the puerperium. This is not to say that often acute anxiety may occur in response to a current situation. For example, a recent bereavement can produce signs indistinguishable from an acute depression. However, this type of depression is time limited, and afterwards the patient loses symptoms of anxiety if she has the ability to adjust in a normal manner. If, however, a bereavement results in or coincides with new insecurity or with loss of status, chronic symptoms may result. Here is such a case. A young woman complained of menstrual irregularity and backache ever since the birth of her only child of four years. She had a normal family and developmental history, except that as the youngest she was babied and did not mature early. The first time she left home was at her marriage. She and her husband adjusted well, her child was born and after six months her husband was killed. She was immediately taken back into the family fold where she was still treated as the youngest of the family and not allowed to make decisions unhampered for her child. Menorrhagia arose on an anxiety basis. She was advised to move away from her family and when she had established her own home where she was in full control of herself and her child, her symptoms disappeared. Her symptoms were due to a frustrating present situation wherein she was being prevented from fulfilling her role as a responsible mother.

Theoretically, the perfectly mature individual should be equipped to withstand any frustration and still be able to act efficiently. Practically, we know that the human being is frail at best, and in every adult there still lurk the uncertainties and insecurities of childhood. Every adult is a combination of dependency and self-sufficiency. When we meet frustration or a threat to our ego, everyone develops some way of handling it. Some people handle it directly by immediate aggression in a conscious way, with full awareness of the nature of the problem. Other less independent people are unable to carry through an aggressive attack, to remove the frustration, and still remain in control of their own behaviour. In the latter case, the whole process is likely to be excluded from consciousness and thus to create a sort of short circuit into subcortical mechanisms. These subcortical mechanisms can persist and be diverted via the hypothalamus and autonomic nervous system into certain end organs as an outflow. This is entirely without the awareness of the individual; also these symptoms do not give complete relief from the psychic tension, so that a permanent tension is sustained which is the cause of a chronic dysfunction. The theory is suggested, by analogy with the first two laws of thermodynamics, that a certain amount of energy is used up in the

production of symptoms, thus reducing the total amount of energy available to the organism for all other functions. On this basis may be explained the chronic fatigue of the sufferer from functional illness. George Soule has attempted to apply the law of conservation of energy to symptom formation. One can regard symptoms which sometimes retain and bind discharges of vital energy as the counterpart of the heat and friction produced in electrical or chemical reactions which embody some of the transformations of physical energy. The analogy is close, as recent physiological research has shown, that changes in the body which are associated with emotional stimuli are, in sober fact, basically changes in temperature, electrical potential and chemical composition. Vital energy, therefore, may sometime be revealed as identical with physical energy, and its transformations as identical with physical work, heat, electrical or chemical change.

If we can think of neurotic symptoms then as by-products or diverted channels of repressed dynamic energy, which has failed to find its proper or normal outlet in speech or action, they assume their proper perspective in the treatment of the individual. In other words, the symptom is an anxiety reducing mechanism. By analogy, if bleeding occurs from cancer of the uterus, our main concern is not to direct treatment toward blood replacement alone, or to eradicate it by local measures, but to remove the pathological process which is causing the bleeding. In the same way, we look for deeper pathological elements in the emotional life to counteract when we attempt to control a neurotic symptom, such as backache, metrorrhagia or amenorrhea. This concept explains why the presence of neurotic symptoms is necessary for the balance of the emotional equilibrium of the maladjusted or immature patient. If the local symptoms be abolished, and the conflict is not solved, another diversion channel will be utilized and may appear by way of another organ system. Our aim, therefore, in treating psychosomatic cases, is not to abolish local symptoms, but to lead the patient to recognize his own childish or inefficient reactions to difficulties in his life.

What are the methods in use to reduce underlying anxiety in a patient? First we must distinguish between anxiety caused by organic disease and that caused by repressed emotional conflict. These may co-exist in the same patient, and both may be contributing to the disability. Or they may co-exist and one only may be responsible for the disability. First of all, the presence or absence of organic pathology must be determined. If after necessary correction of organic defects, symptoms persist, one suspects anxiety as a cause of the disability. How can we detect the presence of sufficient anxiety to produce disability? First, the

general bearing of the patient gives us a clue. If she remains harassed and anxious, overtalkative, tense and teary after being told there is no organic pathology, the examiner can conclude that undue emotional tension exists. If she is willing to talk, the anxiety is likely superficial, and not of long standing, and the patient may be quite conscious of it. These are the easy cases to diagnose. The harder ones are the people with deep-seated conflicts of which they are unaware. They are usually resentful of the negative organic diagnosis and the kind of patient who appears to demand surgery or some drastic form of treatment. One patient of this kind did require a hysterectomy but she was suffering more from a gross disintegration of personal relations in her life. After a good recovery from the operation, she showed frank signs of severe depression, and at that time admitted that she had consented readily to the operation "hoping that she would never come out of it." What she was preparing for so enthusiastically was not for eradication of organic pathology, but for a way out of a difficulty which she had been unable to handle herself. These are the people who are not destructive enough to commit suicide, but who would take advantage of a situation which might terminate their life in a physiological way. There are two clinical manoeuvres to uncover this type of hidden conflict. One is to give intravenously from three to seven grains of sodium amytal and watch for ab-reaction. A patient with much repressed emotion which has been held under control for a long time will tolerate incredibly large amounts of barbiturate without the usual sedative effect. Instead, they become talkative, as the control of the cortex is released, much as in the first stage of alcoholism. They will release painful material with accompanying signs of emotional reaction, which later they may have no memory for. This is a useful diagnostic aid, but should be used only by those with experience. The examiner is in possession of valuable knowledge which he can use in an indirect way later with the patient, to show her a more efficient method of handling the conflict. Even the verbal release of this material has a beneficial effect, in that the patient will state she feels freer, lighter or less tired. This can be explained again on the energy theory, in that energy previously tied up in control of painful material is made available for constructive use. Another trick is to encourage a very tense patient to relax consciously. Neuromuscular tension is a common neurotic symptom for repression of painful emotional conflicts. If reflexes are difficult to obtain, and the patient is generally tense, it can be suggested by lifting an arm, then a leg, and letting them fall, that she try to make her whole body go limp. If she succeeds in doing this, the

examiner may then be surprised by an emotional outburst, such as weeping, or a flood of talk, giving a clue to the "real trouble." One grain of sodium amytal intravenously can produce this muscular relaxation and will abolish a pain such as headache or backache of emotional origin, but it is not a large enough dose to produce ab-reaction.

Again, if a patient is depressed, a feeling of guilt and self-depreciation is part of the symptomatology. For example, in a depression at the menopause, one patient showed an exaggerated feeling of guilt for current minor mistakes. She had been a productive and upright woman but when depressed she blamed herself out of proportion for small matters which she would have considered unimportant when not depressed. This degree of guilt makes one suspect that it is only a symbol of a deeper and more logical sense of guilt. Under sodium amytal with this patient, it was discovered that her real guilt was over a faintly immoral hidden episode in her life many years before, which she had not faced at the time, but had "just forgotten." Often these episodes are minor. They do not have to be of great ethical import to cause severe symptoms. Another example is of a woman at the menopause with unusual feelings of guilt, which it turned out were based on an erotic experience with her brother when they were both children. After ventilating this experience under sodium amytal, she was able to forget it entirely and lost her guilty feeling in connection with it.

Sherrington has said that there are three ways for the release of emotional tension: 1. in action, which is the best; 2. in speech, which is less effective; and 3. in thought, which is least effective.

Those who solve conflict in action are the well adjusted if the action is constructive socially, and they are criminals if the action is destructive socially. The people who resort to speech are the psychoneurotics who verbalize all their difficulties but without doing anything about them. They suffer on the conscious or cortical level, and the people to whom they talk suffer with them. The third type who take refuge in thought are the cases with diversion of their tensions into a phantasy world, when they are neurotic or psychotic; or into inefficient autonomic channels when some organ shows signs of deranged function because of an unusual load of afferent stimuli from the sub-cortical centres. The psalmist describes this type of reaction when he says, "For while I held my tongue my bones consumed away through my daily complaining." The difference between the well adjusted, the neurotic and psychotic people is more one of degree than of kind. There are some theories, but we still do not know why in one person one organ system rather than another becomes the site of symptoms. As far as gynecology goes, deciding the predisposing factor may

not be so much a personality as a sociological one. Margaret Mead, the anthropologist, has given a comprehensive and fascinating report of her observations of social and sexual behaviour among many primitive tribes, in her recently published book, "Male and Female, a study of the sexes in the changing world." This is well worth reading critically. It is revealing that among the Samoans who live a free and happy sexual life with very few taboos from childhood on, there is no such thing as dysmenorrhoea. There also are no menopausal disturbances, as women rarely live long enough to reach this physiological epoch. In most primitive tribes, she points out that menstruation sets the pace for periodic participation in social affairs, by both men and women. When women are ostracized during menstrual periods, even inhabiting separate huts in some cases, and are not allowed to cook any food when pregnant, their husbands are absented also from social functions. She advances the theory that in our mechanical and competitive culture, with the emphasis on continuous efficiency and production, the role of a woman is continually denied and there are no natural biological stops in the routine. The facts of menstruation and child-bearing are just disregarded and everyone carries on in spite of them. There may be something in the theory that both men and women have lost by trying to minimize the differences between the sexes. She points out that the basic conflicts in the education of girls in our society, holding up masculine standards in education and performance, involve a subtle denial of the dignity of her role as a complete and biologically productive woman in society. It may be that our society represents an incomplete stage in the sociological evolution of the human race, and that the attendant dysfunctions in genital organs, with no basis in organic pathology, represent part of the price we are paying in adapting to a more highly intellectualized way of life.

In summary—I have attempted to outline the historical background of the psychosomatic approach to medicine. The newer physiology gives promise of a better understanding of the mechanism of symptom formation based on anxiety. In gynecology, as in the rest of medicine, our success in handling these patients is based on our knowledge of the role of the emotions in personality development, and our willingness to accept the responsibility of treating the total individual, rather than the individual organ.

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MEDICINE

The Management of Obesity

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I. Definition

Obesity can be defined as the condition where there is an excess of fat in the tissues. This excess results in an increase of body weight. Many tables of normal weights for height and age are in use by various authorities¹. Weights 10% to 20% in excess of this are usually considered to represent obesity.

We agree with Campbell², who after inspection and palpation and a study of weight tables is still inclined to make a diagnosis of obesity on his general clinical impression.

Differential Diagnosis

This is rarely a clinical problem, yet the condition must be clearly distinguished from myxoedema, chronic indurations from congestive heart failure, and the lipodystrophies where the distribution of fat is abnormal. As Dercum's disease has not been established as an entity, the term should be discarded. Ellis and Tallerman³ concluded that the distribution of fat was not helpful in the differential diagnosis of obesity.

II. A Review of Literature as to Aetiology of Obesity

A review of the literature on obesity reveals increasing evidence that the sole cause of obesity is a calorie intake in excess of body requirements. Earlier beliefs that endocrine dysfunction was frequently the cause of obesity had led to a general acceptance of the classification of obesity into exogenous and endogenous. It is noteworthy that most of the subject matter reviewed comes from workers on the North American continent where the supply of food is well in excess of the recognized normal requirements, and that little recent work on the subject has been done by European workers⁴ where the supply of food has been deficient for the past decade. This suggests that there are few obese patients remaining in Europe upon which to base observations. In the past some European authors looked upon obesity as a constitutional anomaly, while American authors have emphasized the endocrine dysfunction theory. The change in concept began with Newburgh's⁵ views that there was no specific metabolic abnormality in obesity. Wilder⁶ stated in 1932, "When all is said on the score of the endocrine glands, it leaves one with the impression that their role in the production of obesity has been astonishingly over-

estimated." Campbell expressed a similar view in ascribing the fundamental cause of obesity to an intake of food in excess of requirements and expressed doubt that the endocrine glands had a role in the development of obesity. Hochman⁷ suggested in 1938 that mental factors may contribute to the development of obesity. Later Bruch⁸ in comparing one hundred and two obese children with normals found more intensive growth and earlier maturation in the obese group, and concluded that this obesity could not be based on hypothyroidism and hypopituitarism. Later the same author studied physiologic and psychologic aspects of food intake in one hundred and forty-two obese children and concluded that the calorie requirements of obese persons are not different from those of normal persons, and that weight increase is proportional to the increase of food intake. The psychologic studies of forty mothers and their children showed emotional immaturity in and over-protection attitudes to, the fat children, two-thirds of the group being either an only child or the youngest child in the family. Major psychic traumata and deprivation during the mother's childhood were other factors considered of significance by the author. A further interesting psychologic study of obesity in childhood was reported by Bronstein⁹ and his group. They studied the physical and psychological aspects of thirty-five obese children drawn from their "Frohlich Syndrome" file, and found no ascertainable endocrinologic evidence as a basis for their obesity. While the achievements of this group were not materially different from the average, their mean intelligence was above average. The majority of the group were interested in sedentary activities, such as going to the movies, listening to the radio, and reading, all three of these diversions being of the class enjoyed best in solitude, i.e. away from their fun-poking companions.

In a comprehensive review, Newburgh¹⁰ reviewed the hazards of overweight and concluded that beyond the age of forty-five years the penalty of overweight is one-quarter to three-quarters excess in mortality. Like Bruch, he found no evidence of altered metabolism and dismisses the lipophilia theory of Von Bergmann. He feels that the only manner in which endocrine dysfunction can cause obesity is indirectly, which agrees with Greene's findings that many so-called cases of endocrine obesity are coincidental to an unrelated endocrine disorder. Newburgh concludes that obesity is caused by overeating and states six causes of overeating, namely, (1) inculcation of the habit by an overzealous or misguided mother;

(2) the gratification obtained from the flavours of foods; (3) the feeling of repose and comfort produced by the full stomach; (4) the temporary respite from difficulties obtained by indulging in food; (5) an unchanged appetite in persons whose calorie need is lessened through illness; and (6) food habits of youth, when the requirements are greatest are sometimes retained through adult life where requirements are less and thus result in obesity. Gastineau, Rynearson and Irmisch¹¹ in 1949 reported similar findings. These authors, then, stress environment factors rather than inheritance, in the aetiology of obesity. Spiegel¹² and Wilder, however, consider obesity may be the indirect result of an endocrine disorder when the latter follows a central nervous system disorder which produces pathological appetite through the diencephalon. Talbot¹³ found 95% of obesity in children to be due to overeating and associates the remaining 5% with mental retardation, an expanding intracranial lesion, hypoglycemia and hypothyroidism. However, in our experience no evidence of aetiological factors other than a calorie intake in excess of requirements has been found with the possible exceptions of the paradoxical weight gain or failure to lose during the first few weeks on a low calorie diet, and a gain in weight of from one to three pounds a few days before menstruation. The retention of fluid has been postulated as an explanation of these anomalies.

A Review of the Literature Pertaining to the Management of Obesity

In the light of the above trend of opinion regarding aetiology the emphasis of treatment has been placed more on dietary management using a balanced, low calorie diet with coincident psychotherapy. Other methods of treatment mentioned in the literature but not advocated include exercise, endocrine therapy, especially thyroid extract, dinitrophenol, amphetamine sulphate and its dextroisomer "Dexedrene," diuretics sweat therapy, laxatives, colonic irrigation, and reducing belts. With regard to exercise, Newburgh has calculated that one must walk 36 miles to lose one pound in weight.

With regard to dexedrene¹⁴, while we have not seen any ill effects from its use, we do not advocate it except in rare instances, and then only as a temporary crutch. With regard to the low calorie diet there is general agreement regarding protein and total requirements, and a trend away from the tough or starvation type of diet. See Table No. 1.

Few details of management of obesity were found in the literature. Bruch emphasized that success depended on co-operation of the patient and that an adequate reduction of weight occurred

when the patient co-operated, i.e. attended the clinic regularly and followed the low calorie diet faithfully. Bruch found only 36% of patients co-operative, but of those who attended the clinic voluntarily expressing a desire to lose weight (i.e. not referred) 87.5% co-operated and lost weight. Hunter reported that of twenty-four hundred and forty-seven obese patients in the London Hospital, only six hundred and eighty-two (27.5%) attended long enough to be benefitted. Of those who went regularly however, 93% were obedient and lost weight. Like Kenyon¹⁵, we have found that on low calorie diets the rate of weight loss was proportional to the degree of overweight.

Table I

Author	Year	Protein	Fat	Average	
				Carbo- Hydrates	Total Calories
Evans and Strang, Pittsburgh	1929	60	29	45	681
Dunlop, Edinburgh	1931	66	38	100	1006
Campbell, Toronto	1936	60	40	100	1000
Bruch, New York	1940	60	40	150	1200
Talbot, Harvard (Children)	1945	53	20	90	750
Rynearson, Mayo Clinic	1949	60	50	110	1000
Rodger, McFetridge, Price, Regina	1950	65-95	45-75	130-225	1200-2000

III. Present Study

Our present study is in a preliminary phase. We have examined the records of six hundred cases of obesity treated with a low calorie diet (1500 calories) and followed during the last 18 months. The source of these cases is shown in Table No. 2. Two hundred and five (34%) of these were referred for treatment of obesity alone, while three hundred and ninety-five (66%) were referred because obesity was considered a deterrent to the satisfactory treatment of other conditions.

Table II

Reason for Referral of 600 Cases of Obesity

	Number of	
	Cases	Per Cent
Obesity Only	205	34%
Obesity Hindering Treatment of Other Conditions	395	66%
Gynecological and Obstetrical	216	36%
Cardiovascular	71	12%
Surgical	56	9.3%
Disorders of Metabolism	28	4.7%
Osteoarthritis	16	2.7%
Dermatological	8	1.3%
	600	100%

A Description of Our Method of Management

Following medical assessment the patient is referred to one of us (E.P.) who interviews the patient, explains the reason for and the nature of the diet, and gives instructions for following it. This also provides the groundwork for ensuing interviews with the patient. An opinion from the patient as to the cause of his obesity often gives a clue to the method of approach. Eating is one of our greatest pleasures as well as a basic human need, and it is understandable that the patient, who has been told that he must modify his whole life in terms of food, is under tension. His behavior is usually indicative of this anxiety. The willingness of the patient to lose weight; a clear understanding of the need for the weight reduction; and a thorough explanation and instruction of diet principles; all determine the success which can be achieved.

Canada's Food Rules, the dietary standard approved for Canada by the Canadian Council on nutrition is the scientific basis for planning low calorie diets.

To provide more satisfying meals, more bulk or quantity or to adhere to a lower calorie prescription, these basic food rules are usually modified—

For example: (a) Proteins may be increased by using skim milk or low fat buttermilk instead of whole milk, allowing 1 pint of skim milk (1 quart for prenatal patients and children) instead of $\frac{1}{2}$ a pint of whole milk.

(b) Fruits—3 servings instead of 2—to provide additional bulk.

(c) Vegetables—those of low carbohydrate content (3-9 gms. per $3\frac{1}{2}$ oz. serving) are permitted as desired.

(d) Potatoes—These are often eliminated, depending on the calorie content ordered, as well as the assurance that the vitamin C requirement will be met by the citrus, tomato or vitamized apple juice group.

(e) Breads and Cereals. We have eliminated cereal which is not well taken without sugar and substituted a "protein breakfast" for better staying power. An exception would be where food costs are of prime importance.

The amount of bread is increased or decreased as the calorie prescription indicates, based on the knowledge that with a reduction in calorie intake, the corresponding need for the vitamin B complex becomes less.

The use of a positive rather than a negative approach to the diet is preferable. The more normal the diet can be the better the psychological effect. The less the patient talks and thinks about food, the easier it will be for him to adhere to the diet. After explanation of Canada's Food Rules,

it usually becomes obvious to the patient why the non-essentials are in the "avoid" list. This explanation offers the opportunity to correct poor food habits, and dissolve the many food fallacies that abound. Nine problems commonly met in this study are mentioned. (1) the "no" breakfast or "poor" breakfast habit; (2) that brown bread has fewer calories than white; (3) that margarine is inferior to butter; (4) the misuse of mineral oil in the preparation of foods; (5) that honey is a natural sugar and consequently has no calorie value; (6) that melba toast has fewer calories than bread; (7) that water makes them fat; (8) that the odors from cooking makes them fat; (9) that pills or exercise alone will reduce weight. Care is taken to adapt the food allowance of a low calorie diet to the practical aspects of the patient's occupation. For example (1) the food budget (skim milk costs 14 cents a quart; whole milk costs 18 cents a quart); (2) the group who are lunch carriers; (3) those who eat all or just some meals "out" in a city restaurant or as a commercial traveller; (4) the patient whose obesity is complicated by functional dyspepsia, peptic ulcer, gall bladder disease or pregnancy; (5) those who live on farms or isolated small towns, who use the lack of certain foods as their alibi for not staying with diets; and (6) usual family eating habits.

Wherever possible the patient returns for weekly weight checks and adjustment of the diet to new levels, as indicated. At these interviews the encouragement, assurance and further explanation or instruction given by the dietitian, together with the personal interest shown in the patient's welfare by the dietitian are the determining factors in the success or failure of the treatment. The value of this regime has become more evident both to us and to our patients in the later period of readjustment when the patient is learning to keep his weight normal. When the patient lives at a distance, contact is held, and morale is strengthened by frequent personal correspondence.

Whether it be listening to the curling triumphs of a shy arterio-sclerotic obese man; the eight-year-old who proudly claims his allowance is now being spent on fresh fruit and comic books rather than on cokes and candies; the young maid reducing with the unconscious motivation of a slender, short boy friend, as well as amenorrhoea; the despondency of a childless wife and the eventual joy of pregnancy (after a substantial weight loss); the trials of a professional chocolate dipper who can't resist them; the thrill of being able to wear a new dress sans girdle for the first time in years; giving the same encouragement through the mails; or trying to pacify those who have been told by well meaning friends that the diet makes them look terrible; the eventual markation "normal weight regained" covers it all.

Table III

Results

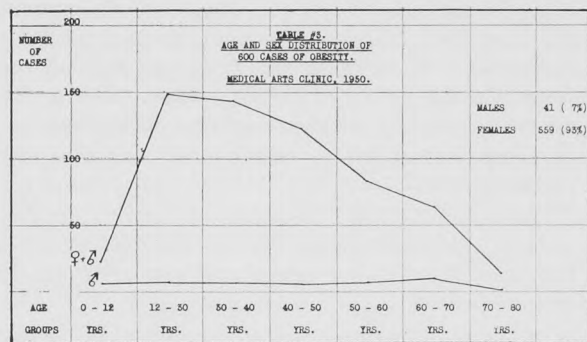


Table 3 shows the age and sex distribution of six hundred cases of obesity. The largest number of patients treated were between the ages of twenty to forty, and rather surprisingly five hundred and fifty-nine (93%) of all patients treated were females. Sufficient time has not yet elapsed to enable us to determine the success of treatment of these 600 cases. We did, however, arbitrarily choose sixty-four patients who had visited the dietitian ten or more times and analyzed our results. All of these patients have been successful in losing weight.

These findings are shown on Table No. 4.

Table IV

**Results of Treatment of 64 Patients
(1500 Calorie Diet and Psychotherapy)
Medical Arts Clinic, 1950**

Number of Weeks on Diet	1,406
Number of Pounds Lost	1,476.5
Average Number of Weeks on Diet	21.96
Average Loss in Pounds Per Patient	23.06
Average Loss in Pounds Per Week Per Patient	1.05

IV Discussion

This preliminary study indicates a high percentage of our patients are referred because obesity is having an adverse affect on associated medical or surgical conditions. The degree of success we have so far achieved in this group seems higher than that reported by other workers. These improved results are attributed to the integration of practical dietetics with practical psychotherapy. For this reason a detailed description of the dietary management of these patients is given. The high incidence of female patients in this study is noteworthy. One is tempted to speculate whether the female is more inclined than the male to relieve her frustrations and tensions by solace in food. Possibly the male has easier access to other psychological outlets than has the female and again these may be relatively more accessible to

him than food. The calorie value of our diet tends to be higher than and the rate of weight loss lower than those previously reported. These trends are intentional. We believe that too rapid weight loss results in the mobilization of depot fat, producing in turn, a high blood cholesterol, which condition is believed to increase the likelihood of vascular accidents.

VI Summary

1. Past and present concepts in the aetiology and management of obesity are reviewed.

2. A method of management of obesity embodying the principles of the low calorie diet with a more detailed programme of psychotherapy and follow-up described.

3. The implications of such a programme are stated.

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PATHOLOGY

Clinical Pathology (4)

White Cell Counts

Paul T. Green, M.D.

White cell counts are made in a similar manner to the red cell count, and this method seems to be satisfactory, as it is universally used. A diluting fluid is employed, that destroys the red cells.

White Cell Diluting Fluid

Glacial acetic acid	1.5 cc
1% methylene blue	1 cc
Water to	100 cc

Filter.

Method

Fill a white cell pipette to the 0.5 mark and wipe off the excess blood from the outside. Draw in diluting fluid up to the 11 mark. The pipette is shaken for two minutes. Blow out half the contents of the bulb, and then fill the counting chamber with a portion of the remaining suspension. Allow a few minutes for the white cells to settle to the bottom of the chamber. Count the total number of white cells seen in the four large corner squares of the counting chamber.

Calculation—As each large square is 1 square millimeter in area, and 0.1 mm. deep, the number of white cells in each large square is the number contained in 0.1 cubic mm. of the fluid. The dilution of blood with dilution fluid was 0.5 in 10 (or 1/20). Therefore, as there were four squares counted, or the number white cells in 0.4 cubic mm. of diluted blood, and if X be the number of white cells counted.

$$\frac{X \times 1 \times 20}{0.4} = 50 \times X \text{ white cells per cubic milli-}$$

meter of blood.

Error

The errors are similar to those encountered in determining red cell counts, except that there is not the tendency for the white cells to clump, nor are they as fragile as are the red cells. There is, therefore, error in sampling, pipette and counting chamber error, individual and random error.

Average duplicate variation runs about 5%, with 95% of the variations in a series within 15% of the mean.

Normal Values

The average normal value for total leucocyte counts is about 7.0 thousand. The normal range is generally given as between 5.0 and 10.0 thousand. However, at some time during the day about 5% of apparently normal individuals will have counts as high as 15.0 or as low as 4.0 thousands. Because of the considerable variation

from hour to hour, and in individuals throughout the day, the total leucocyte count often gives little information in itself, unless it is well beyond the normal range. The white cell count with a differential count gives much more information.

Leucopenias (white cell counts less than 5.0 thousand).

Leucopenias are encountered with fair frequency; however, counts below 2.0 thousand are not encountered very often, and generally are of serious import.

1. Virus infections; measles, rubella, influenza, roseola infantum, dengue, sandfly fever, infectious hepatitis, psittacosis, virus pneumonitis in early stages; sometimes early in infectious mononucleosis.

2. Some bacterial diseases, especially those associated with bacteremias; overwhelming infections; miliary tuberculosis; typhoid; subacute bacterial endocarditis; undulant fever; paratyphoid; and during rigors.

3. Protozoal and rickettsial infections; typhus; tsutsugamushi; visceral leishmaniasis; chronic malaria; relapsing fever.

4. Disseminated fungus diseases; histoplasmosis.

5. Associated with certain blood dyscrasias; pernicious anemia; idiopathic and drug granulocytopenias; aleukemic leukemia; aplastic and pseudoaplastic anemias; Marchiafava-Micheli syndrome.

6. Sometimes in myeloma, and carcinomatosis.

7. Radiation from X-ray, radium, atom bomb, etc.; benzene, lead, mercury; and other bone marrow poisons.

8. Splenomegaly from almost any cause may be associated with leucopenia; splenic neuropenias idiopathic in nature or associated with cirrhosis; tuberculous splenomegaly; sarcoidosis, etc.

9. Miscellaneous; chronic malnutrition; acute traumatic shock; acute disseminated lupus erythematosus; terminal nephritis; Widal's hemoclastic crises; anaphylactic shock.

Leucocytosis (white cell counts over 10.0 thousand).

1. Bacterial infections, particularly if pyogenic in nature.

2. Some fungus infections; some spirochetal infections (Weil's); some parasitic infestations (liver flukes; trichiniasis); some virus infections (typhus; rabies; herpes zoster).

3. Hodgkin's disease.

4. Blood in a serous cavity.

5. Parenteral injection of foreign protein.

6. Pregnancy.
7. Drugs such as arsenic, adrenalin, digitalis.
8. Acidosis.
9. Tissue injury; trauma; postoperative; infarctions.
10. Neoplasms.
11. Black widow spider bite; gout; leucemias; erythremia; acute hemolytic crises; following acute blood loss; severe mushroom poisoning; paroxysmal auricular fibrillation; following sympathetic block; postdigestive; puncture of corpus striatum thalamus; and hypothalamus.

Clinical Pathology (5) Platelet Counts

Paul T. Green, M.D.

No simple, reliable method of accurately determining platelets has been devised. The platelets have a tendency to lyse, once blood is shed, and this makes determination difficult. For this reason too much attention cannot be paid to comparatively slight variations in platelet counts.

Methods

Because of the unsatisfactory nature of existing methods, there are a large number of techniques employed in platelet count determination.

The simplest of these is to make a blood smear from a direct puncture wound, stain it and examine for platelets. One can, with a little experience, then decide whether platelets are greatly reduced; moderately reduced, normal, moderately increased or greatly increased in number, depending on the number of platelets seen per oil emersion field. This method has been elaborated by doing red cell counts from a sample of blood taken at the same time, and then counting the number of platelets seen per thousand red cells seen. It is doubtful whether this has any greater accuracy than the rough method of estimation.

A direct method has been used widely, varying mainly in the diluting fluid used to dilute the blood sample taken. However, platelets tend to disappear at a fairly standard rate (about 1% per minute) no matter what fluid is used.

Diluting Fluid

Sodium citrate	3.8 gm
1% crystal violet	1 cc
Water to	100 cc

Filter. Keep in glass stoppered bottle.

Method

Draw blood from a fresh puncture wound to the 0.5 mark of a red cell pipette; and then fill to the 101 mark with diluting fluid. At once place

the pipette on a shaker, and shake for three minutes. Discard half the contents of the bulb, fill a counting chamber with a portion of the remaining suspension. Allow 15 minutes for the platelets to settle to the bottom of the chamber. Count the platelets seen in the four corner small squares and one middle square, as for counting red cells. The platelets are seen as small, bluish bodies, which are highly refractile; as the microscope is focused up and down on the platelet it tends to shine, like a glass sphere. They can be recognized with a little experience, and must not be confused with small dust fragments or crystals.

Calculation: The calculation is the same as for red cells; multiply the count in the five small squares by ten thousand, to get the number per cubic millimeter of blood.

Note: This solution can be used as a red cell diluting fluid, and platelet and red cell count can be done at the same time.

Error: The error is large, but if attention is paid to timing, it runs about 15%.

Normal Values

Average normal values are 246.0 thousand. The normal range runs from 200.0 to 350.0 thousand.

Significance: Platelet counts below 150.0 are probably significantly diminished. Platelet counts above 400.0 are probably significantly increased.

Thrombocytopenia (plated counts below 150.0).

A decrease in platelets can occur when a patient who has been in bed assumes the upright position. They are also decreased during the first day of menstruation.

Decrease is seen in essential thrombocytopenia, when the platelet count may be almost negligible; also in thrombocytopenia following the ingestion of such drugs as sedormid, etc.; following radiation exposure; in pernicious anemia; aplastic anemias; in the leucemias, particularly the acute leucemias; in myeloma; in carcinomatosis; in chronic nitrogen retention; in severe infections; immediately after blood transfusions; snake venoms; pertussis vaccine; some cases of infectious mononucleosis; thrombocytic acroangiothrombosis; some exanthemata; anaphylactic shock, and splenomegaly from almost any cause may produce thrombocytopenia.

Thrombocytosis (increase about 400.0 thousand).

Following splenectomy; recovery from acute infections; after fractures; trauma; infarctions; ultraviolet radiation; chronic myelogenous leukemia; some cases of Hodgkin's disease; after hemorrhage; some cases of polycythemia vera; high altitudes.

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3
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Clinical Pathological Conference

Medical Department, Deer Lodge Hospital

Cystic Disease of the Kidneys

December 13, 1949.

Mr. W. P. Born Oct. 10, 1893. Died July 6, 1948. Occupation, Steam Engineer. War Service, Feb. 15 to May, 1919.

Enlistment and discharge physical examinations were negative. BP 135/95. Discharged as physically fit.

Past History: Appendectomy for appendicitis 30 years ago. Gassed during service.

Family History: Married—Wife A & W; 3 Children, A & W; Father died of pneumonia; Mother died of kidney trouble; One brother died of kidney trouble.

Was apparently well until February, 1944, when on undue exertion or while doing strenuous work noticed a slight pain in centre of his chest anteriorly, which radiated down the inside of his left arm. The pain was not severe and disappeared when patient stopped walking or exerting himself.

While working (doing some heavy lifting) he developed a severe stabbing retro-sternal pain, with shortness of breath. The pain and dyspnea lasted 24 hours and then subsided—but he was very dyspneic if he tried to get up and walk about. A doctor was called who took an E.K.G. and a diagnosis of Coronary Occlusion was made. Patient was then confined to bed for 6 weeks—returning to work in August, 1944.

August, 1944 to June, 1945—Felt well (continued at work) except for occasional attack of pain in the chest and down left arm.

June, 1945—While at home was seized by an attack of extreme dyspnea. This lasted 12 hours and finally wore off. Remained off work until September, 1945, when he felt well and returned. Began to experience intermittent claudication of left leg.

March 9, 1946—For preceding two weeks has been getting increasingly dyspneic but continued to work. Also complaining of a steady pain in R.U.Q. and increasing anorexia and occasional vomiting. Seen by a doctor who advised admission to D.L.H.

On admittance the admitting officer noted:

Eyes bloodshot and jaundiced.

Chest—Rales at both bases.

Heart—Clinically enlarged (?) Rate rapid and regular at 100/min.

Abdomen—Liver increased to umbilicus and very tender.

Extremities—Getting edema at both ankles.

March 11, 1946—Seen on Ward. History as noted. Review of Systems—Coughs frequently with production of white phlegm (1 oz. daily).

Dyspnea as above. Appetite fair, bowels regular. Nocturia x2—for years. Sleeps restlessly because of dyspnea and nocturia. No headaches. Ankles not swollen (in bed 2 days).

Physical Examination

An elderly grey haired man—not dyspneic at present.

Head and Neck—N.A.D.—Fundi: Grade ii arteriosclerosis.

Chest—slightly emphysematous. A few rhonchi on left side posteriorly. Right side clear.

Heart—Apex in 6th space below the left nipple. Rate 88—fibrillating slowly. Systolic murmur at the apex—(soft), no radiation. BP 150/110.

Abdomen—Wide subcostal angle—slightly protuberant. Appendectomy scar. Liver enlarged four fingers and tender. Indefinite deep seated mass in left upper quadrant. Does not move with respiration—not tender.

Limbs—No edema now—but has had 1 cc of Salyrgan.

March 12, 1946—On Digitalis and Salyrgan.

Urinalysis—Acid Reaction, S.G. 1.016. Albumin moderate amount.

Sugar neg. Micro: occ pus cell.

B.U.N. 37.6 mgm%. W.R. negative.

Mosenthal

Time	S.G.	Amount	Albumen
9 a.m.	1.015	194cc	Moderate amount
11 a.m.	1.013	114cc	Moderate amount
1 p.m.	1.012	118cc	Moderate amount
3 p.m.	1.015	125cc	Moderate amount
5 p.m.	1.012	120cc	Moderate amount
7 p.m.	1.013	148cc	Moderate amount
Night	1.013	224cc	Moderate amount

Urea Concentration

Fasting	1.85%
1 hour after	2.85%
2 hours after	2.65%

April 1, 1946—Patient feeling well and is up and around. Pulse rather slow at times (Purodigin .2mgm daily) BP 160/110. Hgb 100%; RBC 4.9M; C.I. 1.02; WBC 7,500; Discharged April 3, 1946—with purodigin and low salt diet.

July 30, 1946—Admitted with nocturnal dyspnea:

Physical—Dyspneic old man—chest appears emphysematous. Head and Neck—neck veins up to angle of jaw in sitting position. Sclera appear icteric. Lungs—Emphysematous with bilateral rales. Heart—120/min. with many extrasystoles. BP 165/130. Apex ant. axillary. Abdomen—Liver down to umbilicus and tender. Left side of abdomen feels full but spleen not felt. Extremities—N.A.D. E.K.G.—PR .16, QRS .13, Aur. R. 88, Vent. R. 88. Physiological Abnormalities: Partial B.B.B. (left) discordant type.

X-ray of Chest—"Trans diameter of heart—18 cms—Chest 29 cms. Enlargement appears mainly left ventricular. Great vessels somewhat widened. Heterogeneous flocculent, increased densities throughout both lung fields. Interp: Marked enlargement of heart with congestive lung changes."

August 14, 1946—Patient has improved, but liver still remains large.

Urine Concentration:

7 a.m.	Vol. 235cc	S.G. 1.012	Alb. Trace
8 a.m.	Vol. 215cc	S.G. 1.012	Alb. Trace
9 a.m.	Vol. 180cc	S.G. 1.012	Alb. Trace

Cephalin Flocculation—negative. Sed. Rate 4 mm. B.U.N. 24 mgm%; T. Proteins 6.14 gm%.

February 6, 1947—Seen at O.P.D. Condition essentially unchanged. BP 150/110. Liver tender. Moist rales in both bases. Admitted for E.K.G. E.K.G.—PR .17; QRS .09. Aur. Rate 80; Vent. 70. T. Wave in CF 2, much higher. Otherwise no change.

While in hospital: His left leg became gradually painful. L. dorsalis pedis and post tibial not palpable. Right side palpable. Left foot paler and cooler than right. Diagnosed as a popliteal thrombosis or embolism. No response to sympathetic block.

February 9, 1947—Sudden severe onset of pain in left leg below knee. Limb appears pre-gangrenous. Also complaining of nausea and vomited greenish material. Temp. remains normal.

February 22, 1947—Mid thigh leg amputated. Patient stood procedure very well.

March 2, 1947—Patient developed pain in right anterior chest—of sudden onset. Did not run a temperature and cleared up in 4 hours. Physical signs suggestive of a minor atelectasis. X-ray negative (portable).

March 3, 1947—Hb 107%; RBC 5.2M. WBC 11,500; Urinalyses (repeated) S.G. only up to 1.016 on any random specimen. Alb. .3%-.01%; Micros: WBC 12-15, RBC 20-50/Hpf. Icterus Index 13.6 units; B.U.N. 28 mgm%; Vandenberg: Imm. Direct .12mg%; Del. Direct .15mg%; Direct .07mg%; total .22mg%.

September, 1947—Seen at O.P.D. Getting along fairly well but dyspneic at times. Physical Heart—apex not felt. Rate 76, with extrasystoles. No murmurs. BP 140/100. Liver still down one hands breadth. Spleen not felt but suggestion of vague mass in left side (possible left lobe of liver?). Extremities: Amputation well healed. Poor pulsation in right foot.

X-ray of Chest—Essentially no change in size of heart. Congestive changes in lungs much improved.

February 23, 1948—Admitted to D.L.H. complaining of severe dyspnea for one week. On Feb. 22, 1948, developed acute sudden pain in lower right leg. Examination "Bluish discoloration of right leg from mid shin to toes. This area

is cold and painful. No popliteal or tibial pulses felt."

Review of Systems

Cardiovascular: Marked dyspnea on exertion, enlargement of liver, no swelling of ankles.

Respiratory: Cough with shortness of breath. Sputum Oz ii is white and frothy.

Urinary: Nocturia (x6) and frequency (x5). Remainder negative.

Physical: Head and Neck, negative. Heart—Apex in ant. axillary line. Rate regular 82. BP 165/130. Lungs—Basal creps posteriorly. Abdomen—Liver 3 fingers. No other masses felt.

March 15, 1948—Bed rest, salyrgan, and hypertonic glucose, only giving slight relief. Thought to be deteriorating. Leg has become slightly warmer but is still painful. Temp. normal. Urinalysis: Color, deep amber, S.G. 1.010; Alb. .1%; Sugar negative. Micro: WBC 3-4hpf, RBC 60-70hpf.

April 15 to June 15, 1948—Right leg and left stump have become edematous. Having nocturnal dyspnea about 3x weekly—morphine and 1/2 for relief. Seems confused at times.

June 15—B.U.N. 39 mg%. Cheyne Stokes respirations frequent.

June 15, 1948—Edema in leg somewhat diminished. Liver still enlarged. Both flanks also feel somewhat fuller than normal. Main complaint is throbbing pain in foot which is becoming gangrenous at the toes—however, patient's condition precludes any active treatment. Given papaverine and dicoumeral. B.U.N. 80 mg%.

July 6, 1948—At 6 p.m. was talking to nurse when he was given injection of papaverine. Nurse returned 1 minutes later to find patient purple and not breathing. Pronounced dead at 6.10 p.m.

Discussion

This is the case of Mr. W. P. who died at the age of 55.

In 1919 at the age of 36 he was discharged from the army and called "physically fit." BP 135/95.

Without knowing conditions under which this examination was done, can we say that he had at this time a diastolic hypertension and would eventually die of one of its complications? We know from his family history that his mother and brother died of kidney trouble. This is probably an important bit of information. I would like to know the ages of their death.

In February, 1944, he developed a retrosternal pain which radiated down the inside of his left arm. Without further information, and in the light of subsequent history, we must call this angina of effort.

In May, 1944, he developed a pain which did not disappear on rest. This was diagnosed as Coronary Occlusion and he spent 6 weeks in bed.

Unfortunately we have no mention of Blood Pressure before or at this time. Following myo-

cardial infarction, angina is commonly relieved. Apparently this was not so in this case.

In June, 1945, he was seized with an attack of dyspnea which lasted 12 hours. We can only speculate as to what this was. It might have been:

1. Acute Pulmonary Edema.
2. A sudden change of rhythm.
3. Another Myocardial Infarct.
4. A Pulmonary Embolus.

He began to develop intermittent claudication. "Intermittent claudication is one of the most specific symptoms in all the lot of human ailments. It never occurs in the legs as a result of standing, reclining or sitting, and has no relationship to muscle cramps which patients have in bed. It is brought on only by continuous exercise and is relieved promptly by discontinuance of exercise without change of position of the affected part. It always indicates an inadequate supply of arterial blood to contracting muscles."

March 9, 1946, admitted to hospital complaining of dyspnea, right upper quadrant pain, anorexia and vomiting and showing signs of congestive failure, evidenced by basal chest rales, cardiac enlargement and tachycardia, an enlarged tender liver, and "getting" ankle edema.

March 11, 1946. By the time he had been in bed two days his dyspnea had largely disappeared. His fundi showed grade ii arteriosclerosis. His heart was enlarged, with BP 150/110. His liver was enlarged and tender. He still had some chronic pulmonary edema with production of whitish sputum.

A few comments at this time:

1. He is said to have been jaundiced on admission. We have no estimate of icterus or serum Bilirubin, neither is there any further mention of the jaundice, so we will assume it was due to either bad lighting, or wishful thinking, and you can take your choice.

2. He was said to be fibrillating slowly. This was never confirmed either clinically or by E.K.G.

3. His BP was 150/110. While there is possibly some controversy, I would say this was most likely a blood pressure of a hypertensive in failure.

4. B.U.N. was 27.6 mgs%. This reading and all future estimations were above normal limits. We have no reason to suspect extra-renal causes and must consider this as a chronic renal azotemia.

5. A word about renal function tests done on March 12, 1946, and again on August 14, 1946.

Not less than fifty different tests of renal function have been advocated. They may be divided into:

1. Retention of Urea, N.P.N., Creatinine, etc.
2. Elimination or clearance of Urea Nitrogen.
3. Tests based on the urine concentration.
4. Tests based on elimination of foreign substances, such as phenosulphthalein.

The test done on August 14, 1946, is Fishberg's modification of the Volhard's test and is simply the patient's ability to concentrate after a dry diet—volume is not important nor albuminuria—though we should subtract 0.003 from S.G. for every gm% of protein.

The Mosenthal test is samples of urine over a 24-hour period on normal diet and fluid intake. Two factors are considered: (1) S.G. night urine should be much more concentrated, probably .010 difference—this, of course, was not accomplished in this case. (2) Volume—day urine should be about twice night urine, usual figures being D-1000, N-500; more night urine indicating disease. Here we have D-819, N-224. One wonders about the validity of the test when salyrgan is being used.

Urea—The Urea concentration test of MacQueen and Wisslow consists of giving 15 gms. of urea in 100 cc of water. After an interval of 1 hour a urine specimen is examined* for urea—a concentration of more than 2% indicates normal function. So here we have two normal and one grossly abnormal test.

April 1, 1946, with essentially the same blood pressure he was discharged apparently reasonably well controlled with digitalis and a low salt diet.

July, 1946, he was again admitted with congestive failure evidenced by engorged neck veins, basal rales and enlarged liver. His chest X-ray showed left ventricular enlargement with congestive pulmonary changes. His E. K. G. showed discordant L.B.B.B. He showed poor renal concentration. We have only one Laboratory examination of Liver Function—a negative Cephalin Flocculation test. This is not much to hang our hats on but we must make use of it.

Seen seven months later in the O.P.D., condition was essentially the same.

About February 8, 1947, he developed pain in his left leg and it was noted the peripheral pulsations were absent and the leg felt cold and appeared pale. On February 9 he had a sudden severe pain below his left knee and eventually developed gangrene in this foot. In spite of a Sympathectomy he later required a mid thigh amputation. There appears to be some question at this time as to whether this was a thrombus or an embolus. This is not surprising as this is often difficult or impossible to distinguish. We know that pain can begin suddenly in about one-half of the cases of both embolus and thrombus or be delayed for several hours in either. Pain would seem to be more dependent on concomitant spasm than on actual occlusion. Heart disease, especially Myocardial infarction is a site for embolus but this is also a precipitating factor, in thrombosis. Fortunately treatment is approximately the same in both and differentiation is not essential. I would guess he had a thrombosis.

On March 2, 1947, he had a minor respiratory upset with sudden onset of pain in the right chest, lasting about 4 hours, and with physical signs suggesting atelectasis. Without further information on the time interval alone I would suspect a post-operative pulmonary infarct which would probably not have shown on the portable X-ray plate which was probably taken too early.

March 3, 1947. Here we have a number of Lab. findings significant of which are gross albuminuria, low urine specific gravity, RBC and WBC in urine; and a normal Serum Bilirubin.

Seen in September, 1947. BP and heart size were approximately the same. His congestive changes had improved, his liver was still grossly enlarged.

Five months later, on February 23, 1948, he was re-admitted with complaints of:

1. Dyspnea with cardiac enlargement.
2. Sudden onset of pain in the right leg which became bluish, cold and showed absent arterial pulsations.
3. Cough and sputum with basal rales.
4. Hepatomegaly.

April to June, 1948. We can pass over the next three months quickly. His congestive failure became worse with nocturia, dyspnea and peripheral edema. His remaining leg became gangrenous. He had progressive evidence of nitrogen retention with rising B.U.N., nocturia and frequency, and Cheyne Stokes respiration, until finally rather suddenly on July 6th, 1948, he died.

This would presumably, on the surface, then appear to be a case of combined hypertension and arteriosclerosis.

This was characterized by:

1. Coronary heart disease with angina progressing to infarction.
2. This followed by progressive congestive failure.
3. Arterial thrombosis occurring on an arteriosclerotic basis with loss of one lower limb and gangrene of the other.
4. Hypertensive renal disease with albuminuria, low specific gravity, cells, and eventually nitrogenous retention terminating in uremia.

It is of interest in this guessing game to guess at the actual mode of exit. He died suddenly and was blue. He may have had another infarct in his heart, ventricular fibrillation, a massive pulmonary infarct or since he was in such a terminal state merely a generalized cessation of life. I can come no closer.

However, this would seem too simple and straightforward and on looking more closely at the precis there are several things left unexplained:

1. (a) The persistent rather tremendous hepatomegaly. Time does not permit a close scrutiny of all the causes of liver enlargement. Yet I think we can quickly rule out inflammatory processes,

blood dyscrasias, storage disease, the reticulo-endothelioses, biliary obstruction, Banti's syndrome, etc., as being incompatible with the history. The one function test done, Cephalin Cholesterol, was normal.

(b) Can it all be explained on a straight congestion basis? Huge livers on this basis are most commonly due to (1) Mitral valvular disease, with or without tricuspid insufficiency—which he almost certainly did not have; (2) constrictive pericarditis—which he did not have; (3) some degree of chronic corpulmonale on an emphysematous basis which he may have had; (4) much more unusually due to hypertensive coronary heart disease which he almost certainly did have.

Moreover while his congestive failure improved with treatment his liver did not regress. At times when he was almost completely free of heart failure his liver was still a handsbreadth enlarged.

2. There is a finding which repeatedly appears and which I have purposely avoided so far. On:

March 11, 1946, indefinite deep seated mass in left upper quadrant.

July 30, 1946, left side of abdomen feels full but spleen not felt.

September, 1947, spleen not felt but suggestion of vague mass in left side (possibly left lobe of liver).

June 15, 1948, both flanks also feel somewhat fuller than normal.

In considering swelling of the left hypochondrium there are not many organs to consider.

1. Stomach and colon or tail of pancreas—unless they contained some very silent primary tumor we have no cause to indict them.

2. We have been told the spleen was not palpable.

3. Now that we are living in the new endocrine era we must be extremely careful before we eliminate tumors of the suprarenals:

(a) A cortical tumor does produce hypertension but we have no other endocrine changes to assist our diagnosis.

(b) A pheochromocytoma of the adrenal medulla could produce hypertension. Yet against this are:

1. The hypertension was fixed not paroxysmal—although we know this is not essential.

2. There is absence of other adrenalin phenomena.

3. The patient is rather out of the age group.

4. Size of the mass.

5. Kidney:

(a) Could this patient have been harboring a hypernephroma with gross secondary liver involvement. He had only microscopic hematuria. Yet he might have had secondary involvement of the contralateral kidney with a uremic death.

I can neither prove nor disprove this diagnosis. I would not expect this degree of liver enlarge-

ment due to metastases to be compatible with two years of life.

I suppose a huge hydronephrosis might be present but we have no evidence of a septic process such as usually occurs when these become infected.

The other cause of kidney enlargement is perhaps even more likely. I speak of congenital polycystic disease.

From Boyd's Surgical Pathology I quote "The disease has a strong tendency to be hereditary. Cyst formation of the liver occurs with curious frequency."

From Tice's Practice of Medicine: "It is noted that the disease is often found in more than one member of the family and in successive generations. Its familial incidence, congenital origin and association with cysts in other organs especially the liver, all suggest that this disease belongs to the group of congenital developmental disorders."

This man's mother and brother died of kidney disease and he had an enlarged liver.

About 8% of polycystic disease is unilateral.

It should be remembered that the disease presents symptoms in the early years or is silent until later in life.

Also that its presenting symptoms may be:

1. The so-called "surgical" type with pain, fever, hematuria, colic or infection of the cysts.

2. The much more common "medical" type—presenting himself with symptoms of renal insufficiency often similar to that of glomerulonephritis.

The patients almost invariably show albuminuria low specific gravity.

Hypertension occurs in about 60%.

All these features our patient showed. In Bell's series the initial symptoms occurred most frequently in the fifth decade.

It is of interest to speculate on other disease processes which might have produced this entire picture. (1) Thrombo-angiitis obliterans which occasionally produces visceral involvement, I think can be discarded on age of onset, absence of involvement of upper limbs, absence of phlebitis. (2) Disseminated lupus or periarteritis nodosa must, I suppose, be included in any differential these days—especially in this hospital but in this case I don't believe it necessary to invoke the metaphysical.

My final Diagnosis is then:

1. Hypertensive and coronary heart disease—I would expect a heart with a large left ventricle, and evidence of old and probably recent infarction.

2. Arterial thrombosis in the right leg probably iliac or popliteal—arteriosclerotic.

3. Congenital polycystic kidney disease involving at least the left and probably the right kidney.

4. Hepatomegaly with cardiac cirrhosis and possibly cystic involvement.

5. Possibly hypernephroma with secondaries in the liver.

J. H. Martin.

December 13, 1949.

Autopsy Findings, No. 423

General Description

The body is that of a well developed and well nourished adult male, 5 feet 4½ inches in length. The left leg has been amputated 30 cms below the anterior superior spine. There is pitting edema of the right leg to the groin and the great toe shows dry gangrene of the distal phalanx.

Cranial Cavity

The brain, meninges and cerebro-spinal fluid are normal. The cranial nerves are intact, but the cerebral vessels show advanced atheroma with calcification.

Thoracic Cavity

The right lung weighs 605 grams, the left 652 grams, and are free of adhesions. All lobes were slightly edematous and an infarct can be demonstrated in the right lower lobe about 2 cms in diameter.

The heart is markedly enlarged, weighing 880 grams. All valves are normal except for atheromatous thickening at the base of the aortic cusps. The left anterior descending coronary was obstructed at its origin and showed advanced atheroma throughout. The apex of the heart shows an infarct (healed) with attached thrombus.

Abdominal Cavity

No Free fluid is seen. The G.I. tract is normal.

The liver was enlarged extending to the iliac crest and weighed 3402 and was markedly cystic—some cysts measuring 6 cms in size. All contained clear fluid. About 25% of the functioning liver substance remained.

The Pancreas is not cystic and normal.

The Spleen is firm and weighs 535 grams.

The right kidney weighed 539 grams and the left 532 grams. Both kidneys are riddled with cysts measuring .3 to 3 cms in diameter, some containing hemorrhagic fluid.

The right popliteal artery is occluded at its bifurcation. There is a fusiform aneurysm of the abdominal aorta extending 15 cms proximal to the bifurcation, being 6 cms in width and 3 cms in thickness. The aneurysm is filled with laminated clot and only a small channel remains along the vertebral surface of the aorta.

Microscopic Findings

Heart—Myocardium shows marked fibrous replacement of degenerated muscle with more recent swollen degenerated fibers. There is a recent infarct area with surrounding hyperemia and round cell infiltration.

Lungs—Right—Section shows a small area of infarction surrounded by hyperaemic fibrosis and having a central artery with a clot. The lung also

shows some atelectasis and numerous brown pigmented heart failure cells.

Liver—Section shows extreme congestion with widespread parenchymatous degeneration and scattered fibrosis. There is deposition of blood pigment. Liver contains cysts with epithelial lining of one row of cubical cells.

Kidneys—Sections show multiple cyst formation of Swiss cheese like material. The cysts are lined by one layer of cuboidal epithelium similar to that seen in liver. There is marked hyaline and fibrous degeneration of glomeruli accompanied by round cell infiltration and fibrosis. The remaining glomeruli are hypertrophic. Many of the cysts contain pink colloid like content. Collecting tubules are much dilated.

Popliteal Artery—Section shows artery completely occluded by a clot which is largely organized and with small openings of recanalization. The arterial wall is much thickened and degenerated with atherosclerosis to cholesterol deposition.

Summary

1. Myocardial infarction due to coronary sclerosis.
2. Polycystic (congenital) disease of liver.
3. Polycystic (congenital) disease of kidneys.
4. Infarction of right lung.
5. Aneurysm of abdominal aorta.
6. Thrombosis of right popliteal artery with gangrene of toes.

Cystic Disease of the Kidneys

General Description

Cystic renal disease may be divided into 2 broad groups:

(1) **Subclinical**—Here we have enlarged kidneys filled with cysts but still retaining sufficient parenchyma to maintain normal function. Solitary cysts may produce symptoms if huge or if they become infected.

2. **Clinical**—Here we have great enlargement of the kidneys characterized by large numbers of closely packed cysts with only small scattered islands of persisting parenchyma.

Classification of Renal Cysts (Bell)

1. Cystic disease (typical polycystic kidneys).
 - (a) Bilateral polycystic kidneys:
 - i. Clinical.
 - ii. Subclinical.
 - (b) Unilateral polycystic kidney.
2. Large solitary cysts.
3. Multiple small cysts associated with contracted kidneys.

Frequency

The incidence of polycystic kidneys varies in different reports from 1 in 350 to 1 in 500 depending on whether the subclinical cases are included. If so this summates to roughly 1:420. It is not infrequent finding in stillbirths (1:200) (neonatal

incidence 1:621). Unilateral polycystic disease occurs in 4% of cases.

In all studies of polycystic kidneys the recorded age represents either the age at death or the age when symptoms first appeared. On this basis it has long been observed at two periods—early infancy and adult life. Few cases are clinically diagnosed before the third decade. Why some die in infancy and why there are a few clinical cases in the first three decades has never been satisfactorily explained. Most clinical cases are seen between the ages of 45-60 years. For some unknown reason the cysts may remain latent for years and then begin to enlarge; or perhaps the parenchyma is capable of compensatory hypertrophy until later middle life when it fails.

Sex

No difference in sex incidence.

Clinical Features

The symptomatology and findings vary with the stage of the disease which are clinically arbitrary into 3 convenient stage types:

(a) Early Stage

A diagnosis may be found here by finding one or two palpable kidneys or on a chance pyelogram done to exclude renal disease.

(b) Surgical Type

The initial symptoms in this type are those of unilateral disease—viz., a palpable kidney with localized pain and tenderness, fever, leucocytosis or there may be attacks of hematuria. If both kidneys are palpable the diagnosis is usually clear—if only one is felt the clinical diagnosis is usually secondary to an excretory urogram. At times renal colic due to passage of blood clots may be encountered, or infection of one or more cysts may give rise to pyuria and pyelonephritis. Blatt is of the firm opinion that in such cases if retrograde studies of urine samples and indigo carmine excretion indicate that unilateral function is good the infected or non functioning kidney should be removed even though bilateral disease exists (quotes 2 cases surviving 12 and 15 years).

(c) Medical Type

Here the presenting symptoms are frequently those of renal insufficiency with hypertension. Clinically it may be indistinguishable from chronic glomerulonephritis. Frequently the patient complains of weakness, vague abdominal pain, vomiting, etc., a well defined syndrome of renal disease with hypertension and insufficiency.

(a) **Albumin** is found in about one-third of cases and is probably due to pressure on veins for there is no glomerular pathology discernible.

(b) **Gross Hematuria** is seen in one-third of cases and microscopic blood in 75% of cases.

(c) **Renal Function** is diminished as the disease advances. The specific gravity is low and the concentration tests show progressive deterioration.

Oliguria is the usual terminal manifestation but polyuria has been authentically observed.

(d) **Blood Pressure:** The older view that hypertension and polycystic renal diseases are not associated must be discarded. It is usually moderately elevated systolically (140-170 mm Hg) and rather severely diastolically (100-103 mms Hg). If hypertension is absent then the parenchyma is usually found to show only moderate atrophy.

(e) **Hypertrophy of the heart.** Statistically it is moderately enlarged (470 gram average) and although it occurs very frequently it is not a conspicuous feature in the majority.

(f) **Renal Insufficiency**

These are the same as those of chronic glomerulonephritis (retention acidosis), with vomiting, nausea, weakness, constipation or diarrhea with weight loss. There is a raised B.U.N. and blood creatinine.

(g) **Cerebral Hemorrhage** — It is incorrectly thought to be a cause of death but the incidence is no higher than a control group of hypertensives.

Duration of Symptoms

Since the disease is congenital the duration of symptoms depends to some extent on the onset of symptoms and the effort made to diagnose their cause. Generally 50% of cases survive at least 5 years after the diagnosis is made. The pyelogram is the most helpful instrument in this respect.

Heredity

It has been known for many years that heredity plays a major role and it is now clearly established that it is the most important factor in etiology. The tendency may be transmitted by either sex and is apparently a dominant gene.

Diagnosis

Enlargement of kidneys when bilateral and clinically evident is seldom due to anything else. In 90% of advanced cases at least one organ is palpable.

For the most part the symptoms do not differ from chronic glomerulonephritis. Marked edema is very rare, attacks of hematuria correspondingly common.

The pyelogram shows elongated pelves and calyces with distortion of their outline. If renal function is very poor, pyelography is poor and the test dangerous.

Pathology

The external surfaces are closely set with rounded, elevated areas and underlying spheroidal cysts. On section a honeycomb appearance is noted, the cysts in advanced cases being separated by narrow bands of tissue with little or no normal parenchyma. The cysts involve both cortex and medulla. In infants the cysts may be small. Hemorrhage into the cysts is common.

Microscopically small clusters of tubules are seen between the cysts which are smooth walled, being lined by a single layer of epithelium sometimes columnar and sometimes flattened. In the

adult lesions hyalinized glomeruli are almost invariably present. The usual weight is 300-400 gms. (a recorded case where each kidney weighed 3000 grams is noted).

Associated Lesions

1. Calculi—are present in 5% of cases and may cause the clinician to overlook the essential pathology.

2. Cystic disease of the liver—is never seen in the unilateral polycystic but occurs in 35% of the bilateral clinical cases particularly in infants. In the liver the cysts may be few and small or may honeycomb the liver. They are lined by cuboidal epithelium and contain albuminous fluid. They are supposed to be due to failure of small bile ducts to unite with their larger tributaries.

3. Generalized polycystic disease may involve the kidneys, liver, lungs, spleen, brain, and pancreas. These multiple manifestations seldom progress beyond infancy.

Pathogenesis

The cysts have been established as being represented by dilated segments of tubules. It is known that no tubules are formed in the metanephric blastima unless the ureteral bud contacts it. Normally the ureteric gives rise to successive generations of collecting tubules which grow into the metanephric blastima which only then develops convoluted tubules which fuse with the collecting ones. The first few generations of convoluted tubules are not permanent but detach and form a cystic structure (with unattached glomeruli) which should disappear—if they fail they give rise to the clinical cysts. (Pathologically this is sound in that frequently one sees the cyst to contain glomeruli at their wall).

Treatment

Medical—This is largely symptomatic. The development of pyelitis or pyelonephritis calls for chemotherapy. Calculus formation may require manipulation or surgery. The onset of uremia calls for careful control of blood chemistry.

Surgical—As mentioned above — if one side shows advanced infection or calculi unilateral nephrectomy may be indicated. Surgery cannot change the course of the disease but can lengthen the duration of life and improve the comfort of the patient. The destruction of renal tissue results from extrinsic pressure on the renal parenchyma by the enlarging cysts. Cawker feels that surgery is indicated as soon as the disease is recognized—excising a portion of each superficial cyst and aspiration of the deeply situated ones. The operation is completed by marsupialization of the kidney so that the cysts can be re-aspirated through the skin as required, as demonstrated by urography and the patient's symptoms.

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CASE HISTORIES—SURGICAL

Scalenus Anticus Syndrome Scalenotomy

S. S. Peikoff, M.D., F.R.C.S. (Ed.),
F.R.C.S. (C), F.A.C.S.

This is the fifth of a series of Case Histories which will appear in the Review each month. The purpose of these publications is not to present rare or unusual cases but rather to consider the routine management of common surgical conditions.

Case No. 46-3171, Miss D. N., St. Boniface Hospital. Color, white. Age 23 years. Occupation, sales clerk. Date of admission, March 19, 1946. Date of operation, March 20, 1946. Date of discharge, March 25, 1946.

Complaint on Admission

1. Pain in left shoulder, neck, arm and forearm, 5 years. 2. Flushing, tingling and numbness of left hand, 2 years.

Present Illness

In 1940 began to complain of pain in left shoulder. This was at first noticed in the evenings when she returned home from work. Some time later she felt the pain in the side of her neck, in the arm, and down the forearm. There was occasional tingling and numbness in her little finger. She went to a doctor who prescribed Vitamin B injections and diathermy treatments. This did not relieve her. The pain was always worse at night and she found she obtained relief at night by keeping her arm supported on a pillow.

In July, 1941, visited Mayo Clinic. Ulnar Palsy diagnosed. Conservative physical therapeutic measures advised for six months and if no improvement, anterior transplant of ulnar nerve advised. In winter of 1942 her hands would assume a purplish flush when exposed to cold and this was followed by tingling and "prickly" feeling in her fingers. Pain was more or less continuous. In 1943 her arm became weaker. Could not grasp objects firmly. Dropped glasses or plates. Since 1944 the pain has been progressively more aggravating. Pain in the neck, shoulder, and down forearm caused her to lay off work for two to three weeks at a time. Flushing and numbness of hands prevented her from going outdoors in winter months. There was progressive weakness in left arm and dull aching boring pain.

Inventory by Systems

Eyes—Vision good; does not wear glasses; no diplopia; no blurring of vision.

Ears—Hearing good; no tinnitus or vertigo.

Throat—Tonsils removed; no sore throats.

Respiratory—Does not get colds. No cough, expectoration or hemoptysis. No dyspnoea.

Cardio-vascular—No history of rheumatic fever or syphilis. Occasional palpitation. No precordial pain, dyspnoea or dependent oedema.

Gastro-intestinal—Appetite good. No nausea or vomiting. No abdominal discomfort. Bowels regular.

Genito-urinary—No frequency or nocturia. No hematuria.

Menstrual—Menarche 13 years of age. Periods always regular. Interval 28 days. Duration about 4 days, with a moderate flow. Some spotting for 2 days after.

Nervous system—Suffers from pains in right side of her head. Frequent occipital headaches. Cannot sleep on account of pain. Appears irritable and nervous.

Musculo-skeletal—Pain in the left upper limb as described in the present illness. Has no pains in the right upper extremity or the lower extremities. No backache.

Metabolic—No loss of weight. No pyrexia. No night sweats. Feels tired all the time.

Past History

Measles and chickenpox during childhood. 1932, appendectomy. 1936, tonsillectomy. No other illnesses. No other operations. No accidents.

Family History

Father—65, alive and well.

Mother—62, alive and well.

Four brothers—21 to 38, all well.

Three sisters—26 to 41, all well.

No history of tuberculosis, cancer, insanity, etc., in the family.

Physical Examination

A tall, lanky girl, holding her left elbow flexed at right angles, the wrist hyper-extended, fingers flexed in a typical "main en greffe" manner, her left wrist supported by her right hand.

Head and Neck:

Cranial nerves—Intact.

Eyes — Lids, conjunctivae, corneae normal. No Horner's syndrome. No epiphora. No paralysis of the lids. Pupils equal and react to light and accommodation. Ocular fundi normal.

Nose—Slightly deviated septum, to the right.

Mouth—Tonsils out. Teeth very well kept.

Neck—Thyroid not palpable. No cervical lymphadenopathy. No evidence of atrophy of the muscles of the neck. Symmetrical appearance. Palpation of the supraclavicular fossa shows marked tenderness on the left side but pulsations are equal on both sides. No distended veins.

Chest:

Heart—Apex beat $3\frac{1}{2}$ inches from midline in 5th interspace. Rate 74 per minute. Good quality. No extra systoles. No murmurs. Blood pressure 135/90.

Lungs—Chest normal contour. Movements equal and symmetrical. Tactile fremitus good. No dullness on percussion. Breath sounds normal. No adventitious sounds.

Mammae—Breasts quite full. Normal in size. Nipples and aerolae normal. No masses felt.

Abdomen—Normal contour. No swelling or distension. No tenderness. Liver and spleen not palpable. McBurney scar in right lower quadrant. Reflexes equal and present on both sides.

Vaginal examination—Not done.

Rectal examination—Not done.

Spine—Normal curvatures. Flexion, extension and rotation normal. No tenderness on percussion. No atrophy of muscles of the back.

Lower Extremities—No color changes in the feet. Somewhat cold to feel. No deformities. No wasting. No varicosities. No ulcers or oedema present. Pulsations in dorsalis pedis and posterior tibialis good. Vibration sense normal. Sensations to heat, cold and touch normal.

Reflexes:	Right	Left
Knee	††	††
Ankles	††	††
Plantar	V	V

Upper Extremities:

Right limb—No color change in the hand. No deformities. No wasting. Radial pulse good quality. Good strength. Sensations to heat, cold and touch unaffected.

Reflexes—Biceps, O. Triceps, ††. Supinators, O. Blood pressure, 135/90.

Left Limb—The left arm is placed against her side, elbow flexed, the wrist hyper-extended and the fingers flexed in a "main en griffe" manner, and the wrist supported by her right hand. There is marked atrophy of the interossei muscles, resulting in grooving between the metacarpal bones. There is also atrophy of the hypothenar eminence. The little finger is in a slightly abducted position. Cannot put her fingers into the position of writing, and cannot make a fist. Abduction and adduction of fingers very weak. On grasping a piece of paper between the thumb and index finger, there is flexion at the interphalangeal joint of the thumb. There is a marked hollow in the anatomical "snuff-box." The little finger is unable to oppose the thumb. Flexion and extension of wrist—very weak against resistance. The grip of the hand is very weak. Sensory changes—most marked loss of sensation is in the little finger and on the ulnar side of the ring finger. Vascular changes—the hand has a cyanotic flush, cold and clammy to touch. Trophic changes, none. Pain and tem-

perature sensations were diminished over the fingers and palm of the hand, but not in accordance with anatomical supply.

Special Examinations:

Blood Pressure Readings—Definitely decreased on the left side. Right, 135/90. Left, 128/90.

Radial Pulse—Right, normal. Left, weakened. Ulnar not felt.

Brachial Pulse—Equal on both sides.

Subclavian Artery—Normal position, size and pulsation on both sides.

Adson's Manoeuvre—Elevation of the chin and rotation of the head to the affected side while taking a deep respiration resulted in almost complete obliteration of the radial pulse on the left side.

Clinical Laboratory

Urinalysis—Color, amber. Reaction, acid. Specific gravity, 1.022. Albumin, 0. Sugar, 0.

Blood Count—Red cells, 4,470,000. Hemoglobin, 94%. White Cells, 8,300. Differential Leucocytes, Polymorphonuclear. Neutrophils, 70%. Lymphocytes, 30%.

Blood, Wassermann—Negative.

Lumbar Puncture—Fluid clear. Pressure 110 mm. water. Queckenstedt negative. Proteins, 0.02%. Sugar, 0.08%. Chlorides, .74%. Cells—none found. Wassermann, negative.

X-ray:

1. Cervical Rib—No cervical rib is demonstrable.

2. A.P. and Lateral of the Cervical Spine—There is no radiographic evidence of injury or other lesion of the bones and joints examined.

Pre-operative Diagnosis

Left Scalenus Anterior Syndrome.

Indication for Operation

Progressive history of pain in shoulder, neck, arm, limited to one limb.

Presence of marked atrophy of small muscles of hand.

Circulatory changes, disturbed sensation and paresthesia.

Diminished blood pressure in left arm.

Reduction in volume of radial pulse and positive Adson's manoeuvre.

Pre-operative Care

Patient was in good general condition and no special pre-operative care was necessary.

Detailed Description of Operative Technique and of Operative Findings

1. Patient in supine position with pad under neck and facing to right.

2. Skin cleansed with ether and painted with merthiolate.

3. Draped as in Thyroid operation.

4. Incision—was made just above the clavicle from lateral border of the Sternomastoid backwards and upwards into the posterior triangle of the neck for a length of 3 inches.

5. Skin flaps retracted. Deep fascia incised. External jugular vein exposed and retracted.

About $\frac{1}{2}$ inch of the clavicular attachment of the Sternomastoid was cut across. Transverse cervical artery and Transverse Scapular vein cut and ligated. Sternomastoid was retracted to the Midline. This exposed the posterior belly of the omohyoid enclosed in its fascial sheath, which was dissected out and cut across and retracted upwards.

The Scalenus Anterior now came into view. The Brachial Plexus was seen emerging at its lateral border. The phrenic nerve was seen passing over the anterior surface of the Scalenus Anterior from its lateral to its medial border and was retracted medially. Close to its insertion in the first rib, the muscle fibres of the Scalenus Anterior were divided a portion at a time, over a grooved director, to avoid injury to the Subclavian artery posteriorly and pleura medially.

Special care was taken to ensure division of all the fibres completely until the Subclavian artery could be seen to pass forward. Fascial layer was closed with chromic catgut 00. Skin closed with clips.

Anaesthetic

Pre-medication—Nembutal gr. iss h.s. Morphine gr. 1/6 and atropine gr. 1/150, a.m.

Condition of patient—Good. Temperature, 98°F. Pulse, 76. Respiration, 22. Blood pressure, 130/90.

Anaesthetic—Semi-closed. Nitrous Oxide and Oxygen.

March 20, 1946—Time, 9.45-10.45.

Gross and Microscopic Description of Tissues Removed

None.

Final Diagnosis

Scalenus anterior syndrome.

Progress Notes Including Post-operative Care During Stay in Hospital

March 20, 1946—Condition of patient good. Pulse, 76. Temperature, 98°F. Respiration, 22. Blood pressure, 130/90. Patient reacted well. Complained of some pain at site of operation.

March 21, 1946—Up and around. No pain. Color of the left hand is considerably improved, and the hand comfortably warm. Radial pulse much stronger.

March 25, 1946—Clips removed. Wound looks good. Discharged from hospital. Referred for a course of physiotherapy and galvanic stimulation.

Condition on Discharge

Almost complete absence of pain in the arm and hand. Color of the hand markedly improved. The hand warm.

Follow-up Notes Since Leaving Hospital

May 15, 1946—Patient reports marked improvement in the strength of her hand. No pain. No paraesthesia. Her hand feels warm and comfortable. Advised to continue with physiotherapy. Has returned to work.

October, 1946—Very marked improvement in grip and all movements of little finger. Is able to make a fist. Can put her hand in a writing position with ease. Still some loss of sensation in the tip of the little finger.

June, 1947—Patient is married. Uses her arm with ease. No evidence of any atrophy in the hand. Has no complaints whatsoever. Perfectly happy with her result.

March, 1948—Almost complete improvement in all functions of the hand and sensation.

Jan. 15, 1950—Received letter. Complete freedom from pain. Perfect anatomical and functional result.

OBITUARY

Dr. Edwin Alfred Jones

Dr. Edwin Alfred Jones died at his home in Winnipeg on March 23 after a long illness. Born 77 years ago at Balsam, Ont., he was educated there and at Whitby. In 1899 he graduated in medicine from the University of Toronto and did postgraduate work in England. In 1905 he came to Winnipeg and practised continuously. He served for a time on the honorary attending staff

of the Winnipeg General Hospital and was especially interested in pediatrics. His sports were golf and curling and he was a member of Niakwa Golf Club and of Meridian Lodge No. 140, A.F. and A.M. He served on the official board of Crescent Fort Rouge United Church of which he was a member. He is survived by his widow, two sons, Dr. E. A. and G. M. Jones, and three grandchildren.



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ARTICLE

"The Good Old Days"*

Or

Hospital Costs, Past, Present and Future

Angus C. McGugan, M.D.

Superintendent of University Hospital, Edmonton

A few weeks ago one was privileged to "listen in" on a discussion of a group of "oldsters" or "middle-agers" — the classification, of course, depends on one's own chronological and mental age. The theme was the popular one which is bound to come up for discussion wherever a group of medical economists or near-economists get together, namely—"Hospital Costs are Too High" and "The General Public Can't Afford to be Ill."

Happily man is so adjusted psychologically that he views the past through the rose-tinted glasses of youth. In his reminiscences he relegates unpleasant experiences to the realm of the sub-conscious and parades his pleasant memories through the realm of the conscious. Someone recalled a time in Old Ontario before the First Great War (Circa, 1910) when ward rates in hospitals were \$1.50 per day and there were no hidden costs in taxation. Another recalled that in the Ontario village in which he practised in 1910, one usually spent from 24 to 48 hours on a home confinement and that the standard fee was ten dollars per case, half of which was usually paid in cordwood. Apparently his observation was considered irrelevant by the rest of the group as it was ignored completely. At this juncture the writer removed his rose-tinted bi-focals, gave his presbyopia free range, exchanged nostalgia for realism and dug some of those unpleasant memories out of the sub-conscious. He recalled the summer "holidays" when 'teen age boys spent a ten-hour day on the farms of Ontario in pitching hay, pulling flax, hoeing sugar-beets or weeding turnips, ten hours of back-breaking toil in the heat of a scorching Ontario sun at a gross wage of 50 cents per day. Farm laborers who received maintenance were paid ten dollars per month in those days. Full grown, husky adult laborers were glad to get jobs at a dollar per ten-hour day and bought homes and reared families on that wage. Competent clerks in stores received salaries of from 35 to 40 dollars per month plus the occasional lunch of cheese, crackers and pickles, pilfered from "stock" when the proprietor was out attending the daily council of the village elders at the pub. One recalls vividly the occasion of the resignation of our school principal, a brilliant young man. He left for the Golden West when the School Board

refused to increase his salary as principal of a six-room school from \$375.00 to \$400.00 per year. Of course, the other side of the picture, the cost-of-living aspect, was entirely different from today. Food staples retailed somewhat as follows: milk, delivered, cost five cents per quart, with a generous sediment of barnyard dust at no added cost. Butter was from eight to ten cents per pound. Eggs were from four to seven cents per dozen. The best beef retailed at from ten to 12 cents per pound. A good suit of clothes could be purchased for from ten to 15 dollars and an eight or ten room house could be rented for ten dollars per month. Then, as now, about 30 per cent of the population, consisting of thrifty farmers, astute business men and a few of the professional groups, could afford to be ill. Hospital costs at \$1.50 per day were too high for seventy per cent of the population. One remembers when public ward rates were \$1.50 per patient day! So what! the earning power of the individual today is from six to eight times what it was when the public ward rate was \$1.50 per day. Clothes and shelter cost from six to eight times what they did during the first decade of this century. Food staples retail at from eight to 12 times what they did in 1910. A basic ward rate of \$1.50 per day in 1910 is comparable to and the equivalent of about \$9.00 today.

How and why have hospital costs reached their presently-existing proportions? Those who do not like the consideration of facts and figures would be well-advised to stop reading at this point. The figures used are those of the University of Alberta Hospital for the past fifteen years. The cost experience of this hospital corresponds rather closely to that of comparable hospitals throughout Canada. In the period under consideration, 1934-1949 (Figure 1), the basic ward rates were \$2.50 per patient day from 1934 to 1940; \$3.00 from 1940 to 1945; \$3.50 from 1945 to 1948; \$4.50 during 1948 and \$5.50 during 1949. Note that during this whole period there should have been an annual increase corresponding to the broken line curve (2). The per patient day cost reached its lowest point in 1936 towards the end of the depression, when patient-day occupancy had begun to increase and costs had not begun to rise. With the post-depression return to normality costs rose steadily. They were kept in check by "controls" during the war and skyrocketed after controls were removed in 1946. It is estimated that the per-patient day cost of this hospital for 1949 will be somewhat over eight dollars. Alarming as this figure may appear it is among the lowest in comparable hospitals in Canada. The following table shows how the hospital dollar presently is expended:

* Reprinted from the Alberta Medical Bulletin, Vol. 15, No. 1, January, 1950.

Salaries and wages (exclusive of perquisites)	48 %
Food (raw)	17½ %
Medical (including drugs, cleaning and linen supplies)	8½ %
Departmental supplies	3½ %
Maintenance	5 %
Light, heat, water and phones	3 %
Training school rent and supplies	2 %
Sundry supplies and charges	3½ %
Bad debts	9 %
	<hr/>
	100 %

It is interesting to note that although the buying power of the hospital dollar has been cut in half in the past decade, the ratio of salaries, wages and food costs to the over-all total has not changed materially.

Salaries and wages require 48% of our total hospital budget. When perquisites are added the total is 60% of our budget. Obviously any decreases in hours of employment or increase in salaries will be reflected very markedly in hospital costs. In the past decade we have experienced the institution of the eight-hour day and salary increases to the extent that salaries in every department are now more than double what they were about six years ago. Salary increases alone, exclusive of perquisites, have required an additional increase of \$2.00 per patient day in our rates.

During the period on which the Dominion Government bases its cost-of-living index (1936-39), the average cost of meals, including labor, in this hospital was 14.27 cents. In 1948 the average cost was 37.96 cents. In 1949 the average cost will be at least two cents higher. During 1948 there was an average of 2,500 meals per day to patients and staff at an increased cost of \$592.25 per day. The average daily patient occupancy for the past year was 480. The average increase over the 1936-39 period in per patient day cost due to increased cost of meals was \$1.25. The average cost per patient day in the 1936-39 period was \$3.65. Add to this an increase of \$2.00 due to increased wages and \$1.25 due to increase in food costs and we have a \$6.90 per patient day cost. The very marked increase expected in 1949 is due chiefly to the institution of a cost-of-living bonus provided for the staff since the first of the year and to further increases in raw food costs. In the University of Alberta Hospital the ratio of employees to patients is as 1.3 is to 1. The ratio for all Canada in comparable hospitals is as 1.5 is to 1. I believe that if this fact were appreciated fully, namely that it requires 1½ employees to provide services for one patient for one 24-hour period, there would be less astonishment at hospital costs.

Should the Cost of Diagnosis be Shown as a Hospital Charge or a Medical Charge?

The basic rates are only a part of the patient's hospital bill. Many patients who have estimated their bill by the simple method of multiplying the number of days hospitalized by the basic rate, have been dismayed to find that they owe twice the anticipated amount to the hospital. The better equipped and the more specialized the hospital, the higher are the charges for "extras." In this hospital the average charge for extras is about \$2.50 per patient day but like most "averages" that figure is deceptive. Acute short term surgical cases may find that extras reach a total of \$5.00 per day. An account which came to one's attention recently showed a total of \$81.00 for two days so-called hospitalization. In fact \$11.00 was all the patient paid for actual hospital care; \$70.00 was paid for diagnostic services. Whether or not the practitioner likes to face the fact, it is a fact that he depends in an ever-increasing degree on the laboratories for confirmation or otherwise of his clinical impressions. One raises the question, "Should diagnostic procedure be shown as hospital charges or should they be billed as a medical service charge?"

Someone asks, "Are all these services worth while?" The answer implies both practical and humanitarian considerations. Regardless of the answer, society will continue to demand the best that is available in diagnostic and treatment services. Society consists of a collection of individuals, each of whom wants to live as long and as healthy as possible. As long as our social consciousness and our sense of community responsibility remain as they are at present, society will demand the best possible in medical and hospital services for all who require them regardless of the individual's ability to pay or his usefulness in society. Let us not play "ostrich" and bury our heads in the sands of wishful thinking. There is no immediate prospect for a reduction in hospital costs. There is every prospect of further increases. Since salaries and food costs constitute about two-thirds of all hospital costs, the hospital cost graph will parallel the cost-of-living index graph. There is no magic formula for the problem of providing adequate hospital services to all the people but there are a few devices that have been and are being tried at present in Canada, namely:

1. Tax the fortunate, the astute and the provident to provide for the unfortunate and improvident.
2. Allot a greater proportion of revenue from natural resources to hospitals.
3. Provide and encourage voluntary pre-payment plans.

4. Provide contributory compulsory hospital prepayment plans (if one likes the idea of paternalism and compulsion).

Whatever policy or policies for financing hospitalization may develop, we must accept the fact that we cannot regress. We cannot practice 1910

or even 1940 medicine and hospitalization in 1950. The good old days, if such they were, are gone. The old time horse-and-buggy doctor would be no more acceptable to the public of today than would his horse-and-buggy as an adequate means of transportation.

Narcotic Control

The following letter has been received from the Chief, Division of Narcotic Control, Department of National Health and Welfare, Ottawa:

"Recently an Order-in-Council was passed including in the Schedule to the Opium and Narcotic Drug Act, all analogs and derivatives of Demerol and Methadone as well as synthetic phenanthrene alkaloids. The Order referred to has been published in the April 12 issue of the Canada Gazette, and under the provisions of Section 24 of the Narcotic Act, all similar Orders-in-Council come into force thirty days after such publication.

Actually there are not any drugs of this nature being distributed in Canada by pharmaceutical houses at the present time. The change in the Schedule has been made so that drugs, coming within this category some of which incidentally are known to have been developed in other countries and which possess addiction-producing and addiction-sustaining liabilities, will be subject to narcotic control if and when any attempts are made to import supplies with a view to introducing the medication to Canadian physicians.

I am enclosing two copies of the Narcotic Act showing the amended Schedule. Merely by way of explanation, a portion of Section 10 and Section 13 was deleted, and additional wording added. Section 14 of the revised Schedule is, of course, entirely new.

(10) Ethyl 1-Methyl-4-Phenylpiperidine-4-Carboxylate, commonly known as Demerol, Dolantin, Pethidine, Isonipocaine, Meperidine, and all deriva-

tives thereof, or similar synthetic preparations, for example, alpha-1, 3-dimethyl-4-phenyl-4-propionoxy-piperidine also known as Nisentil, and 4-(3'-hydroxyphenyl)-1-methyl-4-piperidylethyl ketone, also known as ketobemidone, and all derivatives thereof;

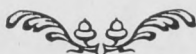
(11) Methylmorphine (codeine) and its salts;


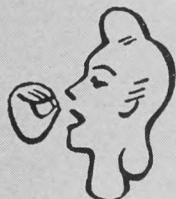


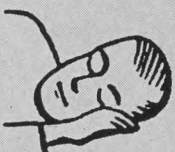
(12) Dihydrocodeine (Paracodeine);

(13) 4-4-Diphenyl-6-Dimethylamino-Heptanone-3, commonly known as Methadone, Amidone, Phylseptone, Dolophine, Turanone, and all derivatives thereof, or similar synthetic preparations, for example, 4,4 - diphenyl - 6 - morpholinylheptanone - 3 hydrochloride, also known as Heptalgin, and 4,4-diphenyl-6-piperidinyl-5-methylhexanone-3 hydrochloride, also known as pipidone, and all derivatives thereof;

(14) Synthetic phenanthrene alkaloids, for example, morphine, N-methylmorphine, and 3-hydroxymorphine, and all derivatives thereof, or similar synthetic preparations, and all derivatives thereof.

At the present time, we do not contemplate circularizing all physicians in your Province regarding the amendments to the Schedule, because, as previously stated, the drugs which have just been included in the Schedule to the Act are not available in Canada at the present time. It may be, however, that you furnish members of your College with quarterly or monthly bulletins and, if so, you might care to draw their attention to the revised Schedule of the Act."



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Medico-Historical

J. C. Hossack, M.D., C.M. (Man.)

Happy Guessing

Dr. Chalmers used to say that in the dynamics of human affairs, two qualities were essential to greatness—Power and Promptitude. One man might have both, another power without promptitude, another promptitude without power. We must all feel the common sense of this, and can readily see how it applies to a general in the field, to a pilot in a storm, to a sportsman, to a fencer, to a debater. It is the same with an operating surgeon at all times, and may be at any time with the practitioner of the art of healing. He must be ready for what are called emergencies—cases which rise up at your feet, and must be dealt with on the instant—he must have power and promptitude.

It is a curious condition of mind that this requires: it is like sleeping with your pistol under your pillow, and it on full cock; a moment lost and all may be lost. There is the very nick of time. This is what we mean by presence of mind; by a man having such a subject at his finger-ends; that part of the mind lying nearest the outer world, and having to act on it through the bodily organs, through the will—the outposts must be always awake. It is, of course, so to speak, only a portion of the mind that is thus needed and thus available; if the whole mind were for ever at the advanced post, it would soon lose itself in this endeavour to keep it. Now, though the thing needed to be done may be simple enough, what goes to the doing of it, and to the being at once ready and able to do it, involves much; the wedge would not be a wedge, or do a wedge's work, without the width behind as well as the edge in front. Your men of promptitude without genius or power, including knowledge and will, are those who present the wedge the wrong way. Thus your extremely prompt people are often doing the wrong thing, which is almost always worse than nothing. Our vague friend who bit "Yarrow's" tail instead of "the Chicken's," was full of promptitude; as was also that other man, probably a relative, who barred the door with a boiled carrot: each knew what was needed—the biting the tail, the barring the door; both erred as to the means—the one by want of presence of mind, the other by lack of mind itself. We must have just enough of the right knowledge and no more; we must have the habit of using this; we must have self-reliance, and the consentaneousness of the entire mind; and whatsoever our hand finds to do, we must do it with our might. Therefore it is that this master act of the man, under some sudden and great unexpected crisis, is in a great measure performed unconsciously as to its mental means. The man is so totus in illo, that there is

no bit of the mind left to watch and record the acts of the rest; therefore men, when they have done some signal feat of presence of mind, if asked how they did it, generally don't very well know—they just did it: it was, in fact, done and then thought of, not thought of and then done, in which case it would likely never have been done. Not that the act was uncaused by mind; it is one of the highest powers of mind thus to act; but it is done, if I may use the phrase by an acquired instinct. You will find all this in that wonderful old Greek who was Alexander the Great's and old world's school-master, and ours if we were wise—whose truthfulness and clear insight one wonders at the longer he lives. He seems to have seen the human mind as a bird or an engineer does the earth—he knew the plan of it. We now-a-days see it as one sees a country, athwart and in perspective, and from the side; he saw it from above and from below. There are therefore no shadows, no foreshortenings, no clear-obscure, indeed no disturbing medium; it is as if he examined everything in vacuo.

My object in what I have now written and am going to write, is to impress upon medical students the value of power and promptitude in combination, for their professional purposes; the uses to them of nearness of the Nous, and of happy guessing; and how you may see the sense, and neatness, and pith of that excellent thinker, as well as best of all story-tellers, Miss Austen, when she says in *Emma*, "Depend upon it, a lucky guess is never merely luck, there is always some talent in it,"—talent here denoting intelligence and will in action. In all sciences except those called exact, this happy guessing plays a large part, and in none more than in medicine, which is truly a tentative art, founded upon likelihood, and is therefore what we call contingent. Instead of this view of the healing art discouraging us from making our ultimate principles as precise as we should make our observations, it should urge us the more to this; for, depend upon it, that guess as we may often have to do, he will guess best, most happily for himself and his patient, who has the greatest amount of true knowledge, and the most serviceable amount of what we may call mental cash, ready money, and ready weapons.

We must not only have wisdom, which is knowledge assimilated and made our own, but we must, as the Lancashire men say and do, have wit to use it. We may carry a nugget of gold in our pocket, or a £100 banknote, but unless we can get it changed it is of little use, and we must moreover have the coin of the country we are in. This want of presence of mind—of having his wits about him, is as fatal to a surgeon as to a general.

That wise little man, Dr. Henery Marshall, little in body but not little in mind, in brain, and in worth, used to give an instance of this. A young, well-educated surgeon, attached to a regiment quartered at Musselburgh, went out professionally with two officers who were in search of "satisfaction." One fell shot in the thigh, and in half an hour after he was found dead, the surgeon kneeling pale and grim over him, with his two thumbs sunk in his thigh below the wound, the grass steeped in blood. If he had put them two inches higher, or extemporized a tourniquet with his sash and the pistol's ramrod and a stone, he might have saved his friend's life and his own—for he shot himself that night.

Here is another. Robbie Watson, whom I now see walking mildly about the streets—having taken to coal—was driver of the Dumfries coach by Biggar. One day he had changed horses, and was starting down a steep hill, with an acute turn at the foot, when he found his wheelers, two new horses, utterly ignorant of backing. They got furious, and we outside got alarmed. Robbie made an attempt to pull up, and then with an odd smile took his whip, gathered up his reins, and lashed the entire four into a gallop. If we had not seen his face we would have thought him a maniac; he kept them well together, and shot down like an arrow, as far as we could see to certain destruction. Right in front at the turn was a stout gate into a field, shut; he drove them straight at that, and through we went, the gate broken into shivers, and we finding ourselves safe, and the very horses enjoying the joke. I remember we emptied our pockets into Robbie's hat, which he had taken off to wipe his head. Now, in a few seconds all this must have passed through his head—"that horse is not a wheeler, nor that one either; we'll come to mischief; there's the gate; yes, I'll do it." And he did it; but then he had to do it with his might; he had to make it impossible for his four horses to do anything but toss the gate before them.

Here is another case. Dr. Reid of Peebles, long famous in the end of last and beginning of this century, as the Doctor of Tweeddale; a man of great force of character, and a true Philip, a lover of horses, saw one Fair day a black horse, entire, thoroughbred. The groom asked a low price, and would answer no questions. At the close of the fair the doctor bought him, amid the derision of his friends. Next morning he rode him up Tweed, came home after a long round, and had never been better carried. This went on for some weeks; the fine creature was without fault. One Sunday morning he was posting up the Neidpath at a great pace, the country people trooping into the town to church. Opposite the fine old castle, the thoroughbred stood stock still, and it needed all the doctor's horsemanship to counteract the law of

projectiles; he did, and sat still, and not only gave no sign of urging the horse, but rather intimated that it was his particular desire that he should stop. He sat there a full hour, his friends making an excellent joke of it, and he declining, of course, all interference. At the end of the hour, the Black Duke, as he was called, turned one ear forward, then another, looked aside, shook himself, and moved on, his master intimating that this was exactly what he wished; and from that day till his death, some fifteen years after, never did these two friends allude to this little circumstance, and it was never repeated; though it turned out that he had killed his two men previously. The doctor must have, when he got him, said to himself, "If he is not stolen there is a reason for his paltry price," and he would go over all the possibilities. So that when he stood still, he would say, "Ah, this is it"; but then he saw this at once, and lost no time, and did nothing. Had he given the horse one dig with his spurs, or one cut with his whip, or an impatient jerk with his bit, the case would have failed. When a colt, it had been brutally used, and being nervous, it lost its judgment, poor thing, and lost its presence of mind.

One more instance of nearness of the Nous. A lady was in front of her lawn with her children, when a mad dog made his appearance, pursued by the peasants. What did she do? What would you have done? Shut your eyes and think. She went straight to the dog, received its head in her thick stuff gown, between her knees, and muffling it up, held it with all her might till the men came up. No one was hurt. Of course, she fainted after it was all right.

We all know (but why should we not know again,) the story of the Grecian mother who saw her child sporting on the edge of the bridge. She knew that a cry would startle it over into the raging stream—she came gently near, and opening her bosom allured the little scapegrace.

I once saw a great surgeon, after settling a particular procedure as to a life-and-death operation, as a general settles his order of battle. He began his work, and at the second cut altered the entire conduct of the operation. No one not in the secret could have told this: not a moment's pause, not a quiver of the face, not a look of doubt. This is the same master power in man, which makes the difference between Sir John Moore and Sir John Cope.

Mrs. Major Robertson, a woman of slight make, great beauty, and remarkable energy, courage, and sense (she told me the story herself), on going up to her bedroom at night—there being no one in the house but a servant-girl, in the ground floor—saw a portion of a man's foot projecting from under the bed. She gave no cry of alarm, but shut the door as usual, set down her candle, and began as if to

undress, when she said aloud to herself, with an impatient tone and gesture, "I've forgotten that key again, I declare"; and leaving the candle burning, and the door open, she went down stairs, got the watchman, and secured the proprietor of the

foot, which had not moved an inch. How many women or men could have done, or rather have been all this.

Horae Subsecivae.
by Dr. John Brown.

BOOK REVIEWS

Diseases of Children

Diseases of Children, Vol. II, 4th Edition. By Garrod, Batten and Thursfield. Edited by Donald Paterson, M.D., and Alan Moncrieff, M.D., p. 1033, Macmillan Company of Canada, 1949. Price \$10.00.

This well-known text, under distinguished editorship, now appears in two volumes. The contributors include many well known figures in English pediatrics.

The text is well written and very readable. It has the clinician's approach to each subject dealt with and each section contains references mainly to English and American journals readily accessible in most libraries.

The sections on neurology and dermatology appealed particularly to the reviewer. As in all texts at the moment, the sections involving therapy of infections are outdated by the time they appear. It may soon be that all such texts will be devoted to description of disease—therapy being left to current journals.

This book should be available in any library proposing to contain texts on children's diseases. It is a good representative opinion of English pediatrics today.

Sydney Israels.

The Development of Gynaecological Surgery and Instruments

The Development of Gynaecological Surgery and Instruments, by James V. Ricci, M.D., Clinical Professor of Gynaecology and Obstetrics, New York City Medical College. The Blakiston Company, Philadelphia, Toronto, 1949, pp. 594. \$12.50.

Bacon said: "Some books are to be tasted, others to be swallowed and some few to be chewed and digested." Dr. Ricci's book is too long to be swallowed, and of too restricted field to be chewed and digested, but it is truly worthy to be tasted again and again.

It is a work of great scholarship and the labor involved in its preparation has been prodigious. In his preface Dr. Ricci claims as his fitness for the task only a thorough grounding in his specialty, a reverence for the past and a love of mankind. His teaching appointments and his reputation as a busy and skilful practitioner establish the truth

of his first claim, the text of the book attest the validity of the others. It is remarkable that one leading so full a life could find time to produce such a work; the only explanation is that he turned to it as a relaxation. "The labour we delight in physics pain."

Its scope is indicated by the subtitle: "A Comprehensive Review of the Evolution of Surgery and Surgical Instruments for the Treatment of Female Diseases from the Hippocratic Age to the Antiseptic Period."

There are ten chapters, beginning with Graeco-Roman gynaecological instruments and ending with gynaecological surgery and instruments of the Nineteenth Century prior to the antiseptic age. At the end of each chapter are numerous references and the book contains an index of proper names. The illustrations, both in black and white and in color, are numerous; the good paper and clear type appeal to the eye.

It is possible that the chronological arrangement tends to make the book in places seem disjointed and repetitious, especially if the reader is interested in tracing the development of a particular subject, e.g. Caesarean section or ovariectomy. However the material is present if one searches, for there is a mine of information. An index of subjects might direct one where to dig.

In passing it is interesting to note the names of men great in other fields. Sir Christopher Wren, the architect; Sir Humphrey Davy, the chemist, and Claude Bernard, the physiologist. Three reproductions of the latter's drawings of instruments testify to his artistic ability.

Even a cursory glance will suffice to impress the reader with respect for the ancients. The illustrations of instruments found at Pompeii show the knowledge of Graeco-Roman physicians in the field of gynaecology. After the twilight of the Middle Ages new light broke in with the development of anatomy under Vesalius, Scarpa and Fabricius, and of physiology under William Harvey. When obstetrics began to be practised by physicians rather than midwives the way was open for the rise of gynaecologists such as Ephraim McDowell, Lawson Tait, Spencer Wells and Marion Sims.

The author believes that his book offers something of value for gynaecologists with leisure and taste in the historical background of their specialty.

While these doubtless will be the first to be attracted, the book appeals to all physicians who are interested in tracing the development of the art of healing even if in a special field. Taste and see.

Sexual Deviations

Sexual Deviations is the modern successor to the works of Knaftt-Ebbing and Havelock Ellis. It brings together the scattered literature on psychosexual pathology and forms a reference work almost encyclopedic in scope. The prevalence of "sex crimes" and the public indignation these cause make this book of topical interest to all who have the handling of actual or potential sex offenders. Thus the book, though of greatest interest to the psychiatrist is also useful to the family doctor and to the internist as well as to the jurist and criminologist. The seven hundred pages are divided into three parts. The first deals with general considerations and the genesis of sexual aberrations. The second part forms the bulk of the book. Each deviation is discussed separately, illustrated by case histories and the psychodynamics explained. Part three included amongst general considerations a chapter on psychosomatic ailments associated with sexual pathology. There is a full glossary, a bibliography and a complete index.

Sexual Deviations, by Louis S. London, M.D., Diplomate, American Board of Psychiatry and Neurology, member American Psychiatric Association, Fellow of the American Medical Association

and other medical societies; and Frank S. Caprio, M.D., member American Psychiatric Association, Society for the Advancement of Psychotherapy, American Medical Association and other medical societies; with a foreword by Nolan D. C. Lewis, M.D., Professor of Psychiatry, College of Physicians and Surgeons, Columbia University, Director New York State Psychiatric Institute and Hospital, Editor of the Psychoanalytic Review. Published by the Linacre Press Inc., Washington 6, D.C. Price, \$10.00.

Journal of Proctology

The American Journal of Proctology is a new periodical and, so far, the only one devoted to this special field. It is published quarterly and will contain the complete proceedings of the international Academy of Proctology, original articles on proctology and allied fields, and comprehensive abstracts of current literature.

It is edited by Dr. Alfred J. Cantor who is assisted by Dr. E. J. Halligan, W. Lieberman, M. G. Spiesman and H. A. Springer. The Editorial Council includes J. P. Lockhart-Mummery of London, and C. J. Tidmarsh of Montreal.

The first number contains, among other papers on Duodenocolic Fistula, Malignant Rectal Polyps, Ulcerative Colitis and Sigmoidoscopy. The subscription rate is \$2.50 for one year or \$4.50 for two years. The publishers: International Academy of Proctology, Inc., 1819 Broadway, New York 23, N.Y.

C.A.M.S.I.

Dear Sir:

In accordance with past C.A.M.S.I. policy, and considering the efficient work already initiated in this respect by our predecessors, the 1949-50 National Executive is continuing the Summer Employment Project.

The co-operation of Canada's medical profession is mandatory to the success of this project, and we are therefore appealing to the above in order to make the plan a success.

The basic aims of the C.A.M.S.I. Summer Employment Project are:

(1) To stimulate a greater interest in General Practice amongst medical students,

(2) To help the medical student acquire a more practical knowledge of clinical work done either in hospitals or in the general practitioner's office,

(3) To furnish means through which the medical student shall be able to keep in closer contact with medical science during the summer holiday period.

The fulfilment of these aims shall be obtained only through the close collaboration of the following medical organizations:

(a) The Canadian Hospitals. They are import-

ant units in the formation of the medical student. We are therefore appealing to them and hoping that they shall favour our project.

Any kind of medical work, clinical and laboratory work would be appreciated by a lot of medical students.

(b) The Provincial Colleges of Physicians and Surgeons. In each province, the College of Physicians and Surgeons could be very helpful in obtaining for C.A.M.S.I. the names of the general practitioners who would be willing to take a medical student with them during the summer holiday period.

(c) The general practitioners' section of the Canadian Medical Association.

(d) The Canadian Hospital Council.

It would be highly desirable if each of the above mentioned groups would contact us by letter as soon as possible so as to give us an opportunity to get the plan rolling. Advertising on this project will appear in the Canadian Medical Journals.

Address all mail to: Mr. Guy Lemieux, National Director of Public Relations, C.A.M.S.I. National Executive, Faculty of Medicine, University of Montreal, 2900 Mount Royal Boulevard, Montreal 26.



Strife

begins at 40

The menopause need no longer be a period of storm and stress for the average woman. With the aid of a highly potent oestrogenic preparation such as ETICYLOL LINGUETS, replacement therapy can be effected quickly, conveniently and economically. Because of their extremely high potency and because their oestrogenic content is *directly* absorbed into the systemic circulation, ETICYLOL LINGUETS provide the physician with a complete substitute for expensive and often inconvenient parenteral administration. As the direct result of this high potency, very low dosage, with its resultant economy, is made possible. For example, rapid relief of symptoms can be obtained initially with one 0.05 mgm. ETICYLOL LINGUET, once to three times a day and control maintained with one 0.01 mgm. ETICYLOL LINGUET twice daily. Equally important too, is the fact that ETICYLOL LINGUETS produce the sense of well-being and strength in a patient so sought after in all menopausal therapy.

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Distinctively coloured, bullet-shaped
ETICYLOL LINGUETS are available in two
strengths: 0.01 mgm. Pink, 0.05 mgm. White (Scored)



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the powerful relaxing action of Trasentin on smooth muscle with the sedative effect of phenobarbital. Both act quickly and safely to relieve pain and discomfort.


When sedation and spasmolysis are equally important.

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EDITORIAL

J. C. Hossack, M.D., C.M. (Man.), Editor

Thanks to Dr. Peikoff

Dr. Peikoff took his recording machine to all the meetings of the American College of Surgeons. He employed a girl to run the machine. He used up all the recording wire in town and flew in more. He had a typist put the recording on paper. He persuaded the authorities of the College to do what they had never done before, that is permit publication in other than a journal with large national circulation. Thanks to him we shall be able to publish important papers by men with international reputations. We are all most grateful to Dr. Peikoff for his interest and liberality, and deeply appreciative of the courtesy of the College.

Helping Each Other

We would remind you that the Review is made possible by our advertisers. They support us partly because they feel that by so doing they are helping our profession but they hope also to advance their own interests. Because we have tangible evidence of our advertisers' helpfulness, it is only fair that they should have equally tangible evidence of our appreciation. Wherever possible their products should have your preference.

There are times when one wants information about a product, an instrument or a service offered by our advertisers. In such a case instead of a detail man looking for you, you are wondering where you must look to find the detail man. As a service to you as well as to our advertisers we are listing elsewhere the names and telephone numbers of local representatives. They will be glad to help you.

The Tisdall Lecture

In 1949 the firm of Merck & Company donated \$5,000.00 to make possible visiting lectureships at twelve Canadian Universities: Dalhousie, Laval, Montreal, McGill, Ottawa, Queens, Toronto, Western Ontario, Manitoba, Saskatchewan, Alberta and British Columbia. By general consent it was agreed that these lectureships should be named in memory of the late Dr. F. F. Tisdall, of Toronto. Professor D. L. Thomson, of McGill, consented to organize the scheme and under his direction the individual Universities have been given much latitude in making their own arrangements.

The University of Manitoba was one of the first to take advantage of this offer, and on March 10th, 1950, Prof. Bram Rose, of McGill, spoke to the

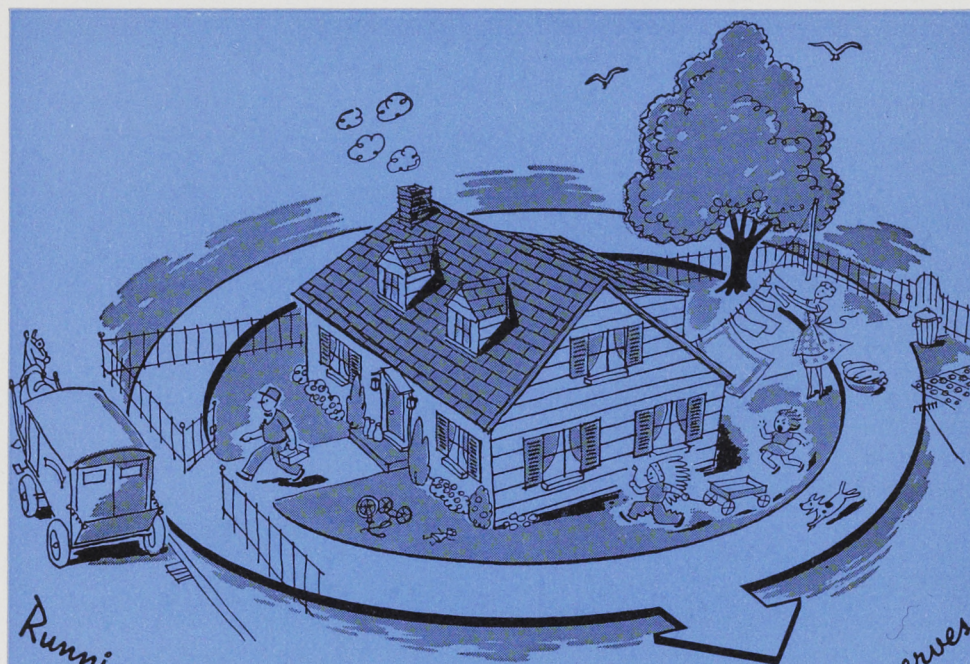
Faculty of Medicine and their guests; his subject was "ACTH and Hypersensitivity." The large number who attended will remember the occasion with pleasure.

The next lecture is scheduled for May 10th and the speaker will be Sir Henry Dale, one of the foremost medical scientists of the century. The subject of his address is not definitely settled but the title "The Physiological and Pharmacological Significance of Histamine" has been suggested. The Dean and the Faculty of Medicine again take pleasure in inviting the members of the medical profession of Manitoba to attend the lecture, which will be held in Theatre "A" of the Broadway Buildings.

Graduation, 1950

At the time this is being written students of the final year in Medicine will be preparing for the coincidental examinations for the degree in medicine and the examinations of the Medical Council of Canada. Following the internal anxiety until results are announced there will be completion of the internship and plans for the future. On Convocation Day the graduates will witness the culmination of a period of study which has extended over a period of two pre-medical and five medical training years. They will probably be told that a University education does not entitle a person to a position though it should have fitted him for one. Then there will be the necessity of planning for the future—some will already have chosen the field of general practice, either alone or in company with an experienced practitioner, or group, while others will be availing themselves of additional training facilities which may extend for a period of five years before certification in a specialty or Fellowship in the Royal College of Physicians and Surgeons of Canada may be realized. The goodwill of those who have been the instructors as of the profession at large goes to the entire class of 1950. Those who have gone before are deeply interested in the success of your efforts as all should be in the maintenance of the highest ideals of the profession. If you have questions concerning the problems which will arise early in your chosen career, go to one of your colleagues and discuss the matter with him. Enter into the activities of your local, provincial, and Canadian Medical Associations and make yourself known to the officers of those organizations and that of your licensing body. Above all, remember that by all your actions with your confreres and with the public is created what is known as public relations (of a desirable or undesirable nature), graded in much the same fashion as you have been in your classes—excellent, good, fair or poor!

M.T.M.



Running a household efficiently requires "iron" nerves

The woman who runs a home, cooks the meals, does the shopping, and keeps the small fry under control has to be made of stern stuff. Few men have what it takes to cope with the unceasing demands of a properly functioning household.

Even the "iron woman" may wilt after a day's work and when she does, the hidden cause may be that she has not enough iron in her blood. Anemia is very common in women because of periodic iron losses through menstruation, which range from 10 to 45 milligrams per period. Nutritionists at Cornell University recently estimated that, to hold her own, a woman must derive at least 10 to 11 milligrams of iron from her diet. Such a diet is not so easily provided. When iron deficiency anemia saps a woman's strength and strains her nervous energy, Hematinic Plastules can do wonders to restore her well-being.



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WALKERVILLE

ONTARIO

SOCIAL NEWS

Reported by K. Borthwick-Leslie, M.D.

Welcome back, if only for a short visit to Dr. and Mrs. John N. Crawford. Dr. John, Assistant Director General of Medical Services, is en route to Vancouver and Whitehorse. He will rejoin Maude in Winnipeg, thence to Ottawa via Minneapolis.

In reverse, farewell to Dr. Stuart Musgrove, who is now serving as Consulting Gynaecologist and Obstetrician with the Department of Public Health in Iraq. For ten years Stuart was with the R.A.M.C. in Delhi, India, and during the war served with the R.A.M.C., ending the war career as O.C. (Col.) of the British Military Hospital in Singapore. Two years post graduate work in Belfast and London, two years in Winnipeg, and back now to the Middle East. There are still a few unexplored fields to conquer, Stuart, and "good luck to ye."

Dr. Lynn Gunn, an old friend of many of us, pre, during and post war, has been appointed Executive Secretary of the College of Physicians and Surgeons of British Columbia, also of the B.C. Medical Association. Dr. Gunn, formerly Medical Superintendent of Deer Lodge Hospital, left Winnipeg in 1947 to assume duties as Medical Superintendent of Shaughnessy Military Hospital, Vancouver. Dr. Macfarland, I ask you, do I congratulate, or commiserate with him, in his new venture?

Sincere birthday congratulations to Dr. J. H. Fraser, Crandall, Man., on his 84th birthday. The occasion was celebrated by a reception in his honor by three nieces in Winnipeg. Forty guests attended, all relatives of Dr. Fraser.

Dr. B. A. Victor wishes to announce that Dr. H. A. Lander is now associated with him in Medical Practice.

Dr. K. I. Johnson, Gimli, Man., has resigned his position as chairman of the school board. He has accepted a position at Pine Falls, and will be leaving Gimli in the early summer. Dr. A. Ingimundson will replace him as chairman of the board.

Whatzit!! That innate McKenty curiosity and tenacity paid off!! Young Jack, 2nd year Medical student won the \$500.00 Tribune prize. I wonder who was more thrilled, Jack or Dr. Jack? It may be the omen of the future in good luck.

Speaking of McKentys — Dr. Victor McKenty also received acclaim in being elected President of the Optimist Club. That could be more of a headache than reason for joy, but with Tony Gowron looking after Finance, probably the headaches will be Tony's. To compensate he was presented with an International life membership. Fooling aside, boys, you do a wonderful job.

Dr. and Mrs. William M. Crawford and children, Selkirk, Man., left a short time ago for Burlington, Iowa, where they will reside. Dr. Crawford was formerly on the staff of the Selkirk Mental Hospital. May we wish them happiness in their new home.

Dr. Ethel Bookhalter arrived by plane from New York to spend three weeks of loafing, selective study holiday, with her father and sister.

Dr. and Mrs. H. B. Sommerfeld spent six weeks in Victoria, B.C.

Dr. and Mrs. A. P. Guttman have returned from a short trip to Chicago and Minneapolis.

Dr. and Mrs. C. M. Strong have returned from a grand holiday in Tucson, Arizona. According to rumor, Con reverted to the Cavalry days and did strenuous horseback riding for days, but the call of that famous garden and patio was too strong, so home they came to . . . spring in Manitoba, 1950.

Dr. Gerard Allison has just returned home from Boston, Mass., where he attended the meeting of the American College of Physicians.

Dr. W. A. Gardner and Betty are wandering about the British Isles and Continent. When last reported they were having a wonderful time in Italy.

Dr. R. M. Creighton, Dauphin, is the new President of the Manitoba Health Officers' Association. His slate of officers, and very efficient they should be, are Hon. President, Dr. W. J. Wood; First Vice-President, Dr. F. K. Purdie, Griswold; Second Vice-President, Dr. Paul L'Heureux, St. Boniface; Secretary, Dr. F. R. Chown, Selkirk; Executive, Drs. S. E. Bjornson, Oak River; J. Sutcliffe, Baldur, Man.; Thos. I. Brownlee, Russell, Man. A strenuous regime has been outlined for 1950-51.

Familiar faces we miss at Medical Arts are those of Drs. F. C. A. Walton and R. W. Kenny. May they thoroughly enjoy their peace and quietness, well deserved.

Dr. and Mrs. Ian S. MacLean, with family, sailed on the Empress of France a short time ago for London, Eng., where Dr. MacLean will do post graduate work next year.

Mr. and Mrs. Irvin R. Triller announce the engagement of their daughter, Joan Elaine, to Dr. Oscar Decter, son of Mr. and Mrs. Harry Decter. The wedding is to be May 17th.

Welcome and God Bless our new arrivals:

Dr. and Mrs. J. J. Elliott, Houston, Texas, announce Mary Cadance.

Dr. and Mrs. G. D. Barnett, Fort San, Sask., March 15th, their son.

Dr. and Mrs. S. S. Bjornson, Ashern, Man., a sister for Allan, named Diane Marie.

Dr. and Mrs. C. F. Benoit, on March 26th, Archie Gordon.

Dr. and Mrs. John E. Mitchell, Red Deer, Alta., a son, April 19th.

Dr. and Mrs. Frank Boulton (nee Barbara Day), a son, called David Allen, April 8th.

Dr. and Mrs. F. H. Graham Mills (nee Mary Lipsett), of Ashcroft, B.C., April 8th, a daughter.

So the boys win again, 4 to 3, but the odds are close.

If anyone wants to know where Mac and Jennie have been or how they enjoyed the scenery ask him!! I did.

Congratulations to the Committee in charge of the recent Refresher Course. Well organized, fairly well attended by interested students. The banquet was wonderful. I felt like that "maid and a million men," reminiscent of Army Days.

Plug . . . Remember . . .

General Practitioners' Banquet and Dance, May 13th, 1950, Fort Garry Hotel. Perhaps we can discuss the things informally, that you refuse to come to official meetings to talk over!!

*lets them
eat cake!*



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LIQUID TAKA-COMBEX, pleasing in taste and appearance, convenient as a vehicle for other medication, is especially suited to children and the aged.

Dosage: Two or more teaspoonfuls during or immediately following meals. **Children:** according to weight and condition.

Each teaspoonful (4 cc.) contains:

Taka-Diastase (Aspergillus oryzae enzymes).....	2½ grains
Vitamin B ₁ (Thiamine Hydrochloride).....	2 mg.
Riboflavin (Vitamin B ₂).....	1 mg.
Vitamin B ₆ (Pyridoxine Hydrochloride).....	0.5 mg.
d-Pantothenic Acid (As the Sodium Salt).....	2 mg.
Niacinamide (Nicotinamide).....	5 mg.

This new liquid preparation, supplied in 16-ounce bottles, is in addition to the familiar Taka-Combex Kap-seals in bottles of 100 and 500.

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COLLEGE OF PHYSICIANS AND SURGEONS OF MANITOBA

Registration Committee

November 18, 1949

Enabling Certificates Confirmed

Chia-li (Kelly) Chu, B.Sc., Yenching U., 1937; M.D., Peiping Union Medical College, 1942.

Dwight Parkinson, M.D., C.M., McGill U., 1941.

Enabling Certificates Granted

Frank William Bailey, B.A., U. Man., 1923; M.A., U. Man., 1929; M.D., Chicago Rush Medical College, 1939.

Dawid Cynberg, M.D., C.M., McGill U., 1948.

Claude Shu Lefevre, M.D., l'Aurore U., 1946.

Certificates of Registration Granted

Derek Homer Rea, M.R.C.S., England, 1944; L.R.C.P., London, 1944; D.R.C.O.G., 1947.

Peter Garth Thomson, M.B., B.S., U. Durham, 1945; L.M.C.C., 1949.

Reference was made to two cases in which written applications for registration had not been received; also two cases in which student registration was sought.

Executive Committee

A meeting of the Executive Committee was held at 8 o'clock p.m., on November 29th, 1949, in the Medical Arts Club Rooms, Winnipeg.

Present: Dr. C. B. Stewart, Chairman; Dr. J. S. Poole, Dr. C. H. A. Walton, Dr. B. D. Best, Dr. I. Pearlman, Dr. Edward Johnson, President, ex-officio, and Dr. M. T. Macfarland, Registrar.

Business before the meeting was as follows:

1. Constituency of Souris

The Registrar reported that a deciding vote had been cast in the Constituency of Souris in favour of Dr. William Malyska, to break the three-way tie.

2. Reciprocal Relations With Other Medical Boards

(a) Medical Board of South Australia

The Registrar read the communication, under date of March 21st, 1949, directed to the Registrar, Medical Board of South Australia, reopening negotiations for reciprocal arrangements. A reply, dated May 24th, was read, advising that the letter would be placed before the South Australian Medical Board for consideration at its next meeting to be held about July. No further word has been received. The Committee deferred action until word is received from the Medical Board of South Australia.

(b) Medical Board of Victoria

The Registrar read his communication of March 21st, 1949, addressed to the Secretary of the Medical Board of Victoria, reopening negotiations for

reciprocal registration. A reply dated May 10th was read, stating that the Medical Board of Victoria could give no decision until this College's position in relation to the G.M.C. was defined. The Registrar replied under date June 22nd, outlining the regulations concerning reciprocal relations between the G.M.C. and C.P. & S. of Manitoba, that all applicants must be British subjects, graduates of British universities, and enrolled on the Medical Register. A reply dated September 13th from the Registrar of the Medical Board of Victoria was read, in which he stated that his board would be unable to take any further action with regard to reciprocity until such time as this College waives the condition that applicants applying for registration must prove that they are British subjects, graduates of British universities, and that they have completed an internship following graduation.

The Registrar believed that his letter of June 22nd had been misinterpreted. He suggested that applicants from the Medical Board of Victoria would have to present a Certificate of Credit under the Basic Sciences Act, a certificate of having completed 12 months internship, either graduate or undergraduate, and that Australian graduation and nationality would be quite acceptable.

The Chairman inquired whether their misinterpretations should be cleared up.

Dr. Walton considered that the Registrar of the Medical Board of Australia had not read the communications with any great care, and seemed quite uninterested.

Dr. Best stated that they were shying around the internship and Basic Sciences Certificate. He said that reciprocity is not a matter of great urgency, and if an agreement could not be reached without lengthy negotiations, that the matter be left in abeyance, and if necessary could be reopened in the future.

Motion: "THAT the question of reciprocal registration with the Medical Board of Victoria be left in abeyance." Carried.

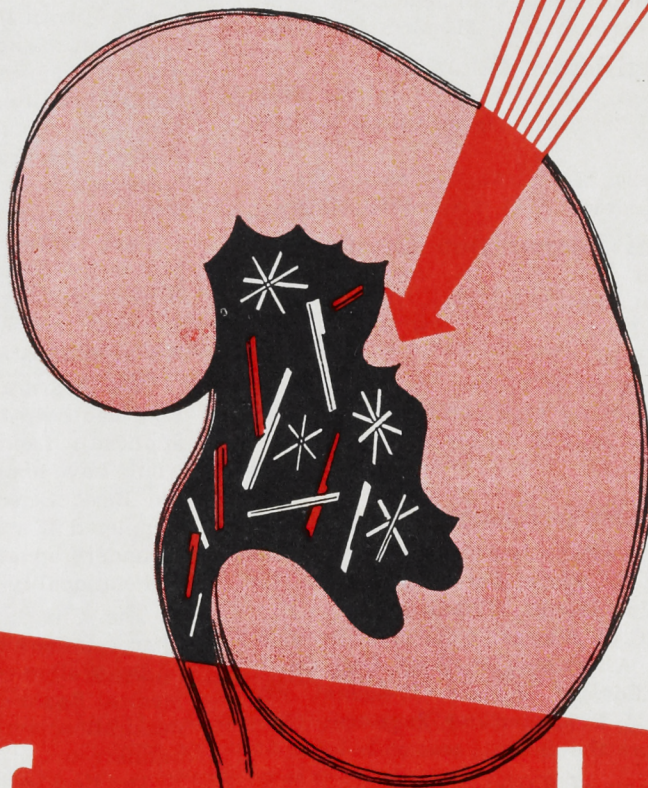
(c) South African Medical and Dental Council

The Registrar read his letter of March 21st, 1949, to the Registrar of the South African Medical Council, reopening reciprocal registration. In reply, dated July 15th, it was advised that no provision exists in the Medical, Dental and Pharmacy Act of South Africa, to enter into reciprocity with this College, and an amendment appears a remote possibility. The South African Medical Board suggested that it may be necessary to amend the Manitoba Medical Act, and inquired whether this College would consider recommending it.

The Registrar stated that the Manitoba Medical

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Trifonamyl is safer than one sulfonamide since in Trifonamyl the concentration of one sulfonamide has no effect on the solubility of another in solution. At the same time the therapeutic concentration is maintained by the total dosage. As a result the possibility of crystalluria, hematuria and obstruction are reduced to a minimum.

Each tablet or teaspoonful contains:

- ▶ **SULFADIAZINE** 2½ GRS.
- ▶ **SULFAMERAZINE** 2½ GRS.
- ▶ **SULFAMETHAZINE** 2½ GRS.

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E T H I C A L P H A R M A C E U T I C A L S

Professional Representative: Mr. J. R. Hope, 264 Lindsay Street, Winnipeg, Man.

Act already covers reciprocity with South Africa in Section 31 (a), so that there would be little difficulty as far as this College was concerned.

The Committee considered that there was little possibility that the South African Medical and Dental Council would be able to amend their Act.

Motion: "THAT the Registrar be requested to reply to the Registrar of the South African Medical and Dental Council thanking him for his courtesy, and pointing out that since the South African Medical Act required an amendment, it would seem impossible to complete reciprocal arrangements at the present time." Carried.

(d) Medical Council of India

The Registrar read communication dated May 17th, 1949, from the Secretary of the Medical Council of India, inquiring whether this Council would be prepared to enter into a scheme of reciprocity with India.

In this connection the Registrar presented Dr. Sen's letter received from the C.M.A. in connection with post graduate training of Indian doctors, which was referred by Council to the Executive Committee. Dr. A. D. Kelly, Assistant Secretary of the C.M.A., inquired whether provincial registration would be required of Indian graduates taking hospital or other training in this country. A copy had been sent to the Registrar of all licensing agencies in Canada.

The Registrar stated that there was no provision in the Medical Act for reciprocity with India and that an amendment would be necessary.

The President suggested that if consideration was given to amend the Medical Act to allow Indian students to do post graduate training in Manitoba, that the amendment should be wide enough in scope to enable the College to give consideration to post graduate training of students from other countries.

It was pointed out that it would be necessary to arrange for institutions where the Indian doctors could do post graduate study, and that the Canadian Medical Association were taking steps to provide facilities on a national basis.

Motion: "THAT the Registrar be instructed to write the C.M.A. that this College would consider opening the Manitoba Medical Act for assisting Indian medical students to obtain temporary licence to do post graduate training in Manitoba, if and when facilities are made available in Canada for such training, and that the Medical Council of India be advised of our action." Carried.

3. Dr.

At the Annual Meeting, Council ordered Dr. _____'s name to be erased from the register. The Registrar requested direction as to whom the notification of erasure should be sent.

The Registrar was requested to send the notification of Dr. _____'s erasure to the Superintendent of the Hospital for Mental Diseases,

Selkirk, and a copy to Mr. F. G. Ritchie, Administrator of Estates of Mentally Incompetent.

4. Life Membership

The Registrar reported that Dr. P. G. Bell had been made a Life Member of the College on November 8th, 1949.

5. General Medical Council of Great Britain Certificates

The Registrar reported that he had written to the General Medical Council of Great Britain, as ordered by Council, inquiring whether the certificate issued by this College to the G.M.C. is required from Manitoba registrants wishing to become registered in Great Britain, but has as yet received no reply.

He also quoted the following information from the 1949 British Medical Register:

"No qualification can be recognized unless it is registered in the possession or part (e.g. State or Province) of a possession in which it was granted." and

"Registration in each province mentioned in this Table is recognized provided that it is obtained either after examination in the Province or after examination held by the Medical Council of Canada and accepted by the Provincial Authorities."

6. Gordon Bell Memorial

The Registrar reported that, at the order of Council, he had written to the three trustees of the Gordon Bell Memorial, requesting their consent to the transactions in the Gordon Bell Memorial Account during the past year, and requesting their authority for similar transactions during the year 1949-1950.

He stated he had received affirmative replies from two of the Trustees.

7. Fidelity Bond

The Registrar advised that at the last meeting of the Manitoba Medical Association Executive held November 20th, 1949, it had been reported that arrangements were going ahead for the bonding of all employees in the combined business offices of the M.M.A., C.P. & S., and W.M.S.

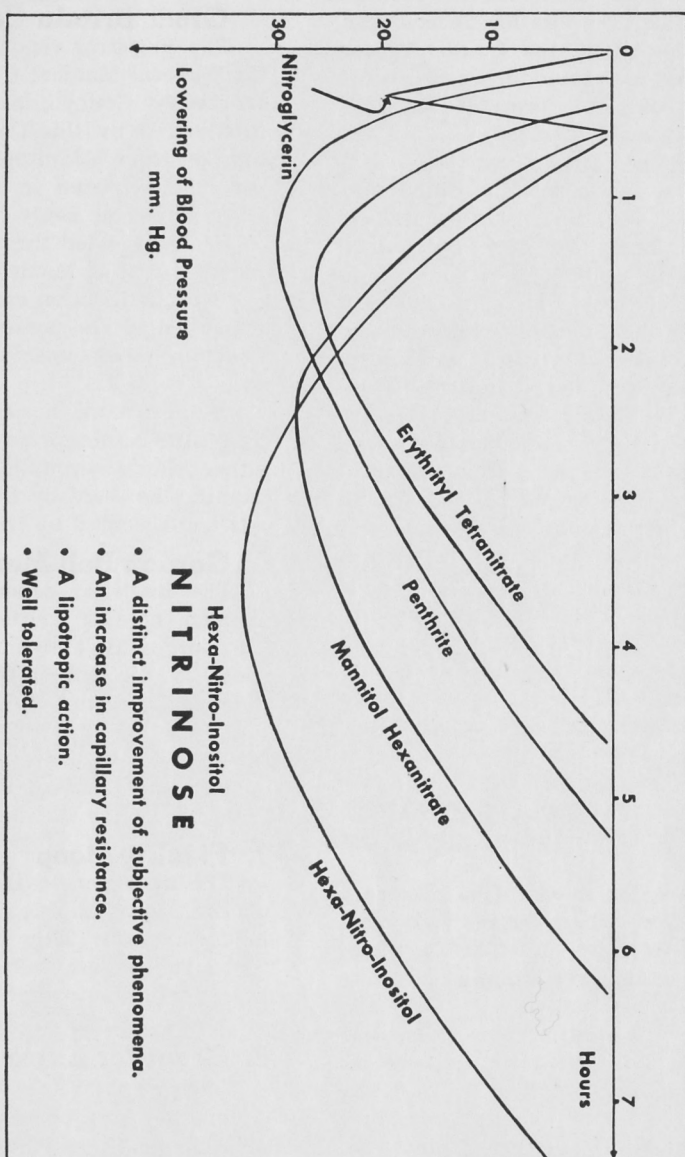
8. Grant for Extra Mural Postgraduate Work

The Registrar presented a letter from the Manitoba Medical Association, dated November 26th, 1949, expressing appreciation for the increased grant of \$500.00 per annum towards extra-mural expenses incurred by the Association.

9. Grant to Medical Library Committee

The Registrar presented a letter from the Medical Library Committee, under date November 8th, 1949, acknowledging with thanks receipt of the cheque for \$750.00, and advising that the money would be of great assistance in meeting the demand for more books and periodicals for the library.

RELATIVE POTENCIES OF CURRENTLY USED NITROUS ACID ESTERS IN HYPERTENSION



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PRODUCT OF THE LABORATOIRE DE PHARMACODYNAMIE CLINIQUE, ST-QUENTIN, ASNE, FRANCE

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ROUGIER FRÈRES, 350, Le Moyne St., Montreal 1, P.Q.

10. Complaint Against Dr.

The Registrar reported that he had received a letter of complaint dated September 16, 1949, from the solicitor of a patient of Dr., involving a bill in which a collection agency had taken action. The Registrar advised he had contacted Dr. and the solicitor, and had forwarded all relevant information to the Chairman of the Taxing Committee. Since the Chairman was not present at the Council meeting the matter was deferred.

The Registrar presented the Chairman's report, received October 20th, in which he stated that the charges made by Dr. were not excessive. The Taxing Committee had never officially met to consider this matter, which, according to the By-laws, should be referred by the Executive Committee.

The Registrar presented the report of the College solicitor in which he states that since the case is already before the courts no useful purpose would be served by the Committee attempting to fix the amount of a doctor's bill unless both parties agreed to be bound by the result.

Motion: "THAT no action be taken." Carried

The Registrar was ordered to notify the patient's solicitor and Dr. that no action was being taken since the matter was before courts and this Executive has no power to intervene.

11. Dr.

As a progress report the Registrar advised he had written to Dr., in accordance with instructions of Council, advising that unless his reports were submitted to the Workmen's Compensation Board without delay, the Council would recommend to the W.C.B. that his name be deleted from the list of medical men who treat cases which are the responsibility of the W.C.B. Word had been received from the Chief Medical Officer that most of the reports had been turned in, and that a further report would be forthcoming at the end of November.

12. W.C.B. Fee Taxing Committee

The Registrar advised that the M.M.A. had expressed appreciation of the grant to the M.M.A. for the payment of the members of the Fee Taxing Committee W.C.B., and reference was made to the very cordial relations which have existed between the C.P. & S. and the M.M.A. during the past three years.

13. Method of Student Admission to the Medical Faculty

At the Annual Meeting, Council passed a resolution suggesting that in acceptance of medical students to the Faculty of Medicine, it be necessary that there be an interview and a satisfactory personality evaluation. The Registrar inquired whether the letter should be addressed to the Medical Faculty, Registrar, President or Board of

Governors. The Committee considered the letter should be addressed to the President of the University, with copies to the Dean of Medicine, Chairman of the Admissions Committee, and Registrar.

It was considered that the motion itself was ambiguous, and the President was asked to write a letter enlarging upon the resolution, pointing out that a personality evaluation should be considered as part of the total appraisal.

Motion: "THAT the President of the College of Physicians and Surgeons, Dr. Edward Johnson, be requested to write to the President of the University of Manitoba, with copies to the Dean of Medicine, Chairman of the Admissions Committee, and Registrar, enlarging on the motion of Council re admission of medical students." Carried.

14. Representatives to the Cancer Institute

The Registrar reported that a Board Meeting of the Cancer Relief and Research Institute would be held Thursday, December 1, 1949, and that the past President and Registrar would attend all meetings until the time of the Annual Meeting, when the new President and the Registrar would take over.

15. Standing Committees

The Registrar pointed out that the Vice-President, Dr. I. Pearlman, had been appointed as member of two Standing Committees, and since as Vice-President he was ex-officio a member of all committees, inquired whether someone should be appointed in his stead.

The Committee considered there was no objection to his remaining on the committees.

16. Scrutineers

The Registrar reported that the two scrutineers, Dr. Elinor Black and Dr. A. R. Birt, and the two alternates, Dr. D. Swartz and Dr. W. T. Dingle, had accepted their appointments.

17. Canadian Arthritis and Rheumatism Society, Manitoba Division

A meeting of the Canadian Arthritis and Rheumatism Society, with representatives of various provincial divisions was held at Toronto, November 24 and 25, 1949, but no report is as yet available.

18. Motor Vehicles Branch

A letter was presented from the Deputy Registrar of Motor Vehicles, advising that the licence plate series being set aside for the use of registered Manitoba physicians would be 1D1 to 1D999, and not 4D1 to 4D999 as previously reported.

19. Increase of Fee for Certificate of Credit

A letter was presented from the Registrar, University of Manitoba, advising that as from December 1st, 1949, the schedule of fees in con-

nection with submitting applications for a Certificate of Credit under the Basic Sciences Act would be \$2.50 for graduates of the University of Manitoba, and \$5.00 for all other graduates.

20. Internship Year

The registrar advised that the Registration Committee was running into difficulty in connection with the resolution of Council passed October 20, 1948, which states that no graduate in medicine be granted an Enabling Certificate to write the examinations of the Medical Council of Canada, a Certificate of Licence, or a Certificate of Registration, unless he produces a certificate indicating that he has served one year's internship in an approved hospital or hospitals. He stated that residents of Manitoba entering first year medicine in any Canadian university register as a medical student with this College, then the College issues their Enabling Certificates to write the examinations of the Medical Council of Canada. According to the Educational Number of the A.M.A. Journal, the Universities of Manitoba, Dalhousie and Montreal, are the only ones which require an internship year for graduation.

A letter was presented from the Dean of the Faculty of Medicine, Queen's University, inquiring whether Manitoba students registered in Queen's Medical Faculty must wait a year after graduation from Queen's during which they must complete a satisfactory internship, before they are issued with an Enabling Certificate to write the examinations of the Medical Council of Canada. The Registrar read his reply to the effect that Manitoba students who registered with this College prior to October 20, 1948, would not be obliged to have an internship year since they were registered before the new ruling, but any student registering with this College after October 20, 1948, would be expected to have a year's internship before being issued with an Enabling Certificate. He thought that if these graduates applied for licence to practise medicine in Manitoba, they would be asked to provide evidence of one year's internship.

One application for student registration, and one for a temporary licence to practise pending completion of Medical Council of Canada examinations, were refused.

Legislative Committee

A luncheon meeting of the Legislative Committee was held at 12.30 p.m. on Tuesday, January 10th, 1950.

Present were: Dr. J. S. Poole, Chairman; Dr. B. D. Best, Dr. F. K. Purdie, Dr. C. W. Wiebe, Dr. I. Pearlman, Dr. Edward Johnson, President, ex-officio, and Dr. M. T. Macfarland, Registrar.

(Regrets for absence were received from Dr. T. W. Shaw).

The meeting was called to consider desirable changes in the Medical Act as directed by Council.

Size of Council

The Medical Act provides for a Council of sixteen (16) elected members, plus two representatives appointed by the Medical Faculty, University of Manitoba.

The size of Council in other provinces is as follows: British Columbia, 9; Alberta, 7; Saskatchewan, 9; Ontario, 18; Quebec, 21; New Brunswick, 9; Nova Scotia, 13; Prince Edward Island, not known; and Newfoundland, 7.

Motion: "THAT a study be made of the medical population in the present federal, judicial and medical districts for comparison with the districts at present constituted." Carried.

The desirable number of council members was left in abeyance until the above information is available.

Term of Office

It was recommended that the term of office be four years, one-half of the Council members to retire every second year.

Discipline

Study of disciplinary powers is being carried out by the Discipline Committee.

Motion: "THAT this Committee recommend that provision for suspension of a member be included in any revision of the Medical Act." Carried.

Registration Committee

January 18, 1950

Enabling Certificates Granted

Yu Hans Tang, M.D., l'Aurore U., 1936; M.D. Louvain U., 1939; M.R.C.P., London, 1948; M.R.C.P., Edinburgh, 1948.

Burton Everett Ammundsen, M.D., C.M.E., 1949.

Sheo-Nan Cheer, B.A., U. Nanking, 1917; M.D., Johns Hopkins U., 1920; D.N.B., 1921.

Temporary License Confirmed

Cecil Harris, B.Sc., U. Glasgow, 1940; M.B., Ch.B., U. Glasgow, 1943; M.D., U. Glasgow, 1949; M.R.C.P., Edinburgh, 1947.

Certificates of Registration Confirmed

Marie Hui-Hsi Feng, B.S., Yenching U., 1928; M.D., Peiping Union Medical College, 1932; L.M.C.C., 1949.

Ching-Feng Hsu, B.S., Yenching U., 1937; M.D., Peiping Union Medical College, 1941; L.M.C.C., 1949.

David Yao Pei Lin, B.Sc., St. Johns U., 1943; M.D., West China Union U., 1946; L.M.C.C., 1949.

Chih-Ming Ling, B.Sc., Soochow U., 1937; M.D., Peiping Union Medical College, 1940; L.M.C.C., 1949.

Dwight Parkinson, M.D., C.M., McGill U., 1941; L.M.C.C., 1949.

Jan Silny, M.D., U. Bruna, 1945; M.D., C.M., McGill U., 1948; L.M.C.C., 1949.

Certificates of Registration Approved

John Allan Eadie, M.B., Ch.B., U. Edinburgh, 1944; D.P.H., U. Edinburgh, 1948.

Joseph Raymond Van Horne, B.Sc., Dalhousie U., 1937; M.D., C.M., Dalhousie U., 1942; L.M.C.C., 1942.

Certificate of Registration Granted

Nona Eileen Wright, M.R.C.S., England, 1940; L.R.C.P., London, 1940.

Medical Student Registration Granted

Walter Peter Bandura, U. Ottawa.

Miscellaneous

Various communications were considered by the Committee.

Registration Committee

February 24, 1950

Enabling Certificates Granted

Louis Murray Mink, final year student, U. Toronto.

Stuart J. Clarke, B.Sc., Washington Missionary College, 1946; M.D., C.M.E., 1946.

Andrew Yiu Suen Chau, M.D., National Medical College of Shanghai, 1948.

Enabling Certificates Approved

Kenneth Chiache Sze, B.A., George Washington U., 1941; M.D., George Washington U., 1943.

Edward Chun Loo, M.B., B.S., National Sun Yat Sen U., 1949.

Enabling Certificates Deferred

Five applicants will be requested to appear before the Registration Committee on March 12, 1950.

Certificates of Registration Approved

John Kenneth Martin, M.R.C.S., England, 1941; L.R.C.P., London, 1941; M.B., B.S., U. London, 1942; D.R.C.O.G., 1942; D.C.H., 1948; M.R.C.P., London, 1948.

Thomas Malcolm Brand, M.R.C.S., England, 1939; L.R.C.P., London, 1939; M.B., Ch.B., Victoria U. of Manchester, 1939; M.R.C.P., London, 1949.

Registration of D.V.A. and Dominion Government Employees

This question was considered and postponed to a future meeting.

Executive Committee

A meeting of the Executive Committee was held at 8 o'clock p.m., on Friday, March 3rd, 1950, in the Medical Arts Club Rooms, Winnipeg.

Present: Dr. C. B. Stewart, Chairman; Dr. J. S. Poole, Dr. C. H. A. Walton, Dr. I. Pearlman, Dr. Edward Johnson, President, ex-officio, and Dr. M. T. Macfarland, Registrar.

Business before the meeting was as follows:

A. Business Arising from Minutes of Executive Committee Meeting Held November 29, 1949

1. Reciprocal Relations with Other Medical Boards

(a) South African Medical and Dental Council

The Registrar reported he communicated with the South African Medical and Dental Council on January 23, 1950, explaining that reciprocity with South Africa was covered by sections 31 to 33A of the Manitoba Medical Act, but since the Medical Dental and Pharmacy Act of South Africa would require amendment, it would not appear that arrangements might be completed at the present time.

A reply, under date of February 10, 1950, was read, advising that the matter would be submitted for consideration to the Education Committee of the South African Council.

The matter was tabled, pending additional word from the South African Medical and Dental Council.

(b) Medical Council of India

Following the last Executive Committee meeting, the Registrar communicated with Dr. T. C. Routley, C.M.A., advising that if and when facilities were made available in Canada for institutions in which post-graduate study might be carried on by graduate medical students from India, this College would consider amendment of the Medical Act to provide temporary licence for those training in Manitoba. Dr. Routley replied that the matter would be brought before the Executive Committee at its next meeting which will be late in March.

Subsequently, a letter was received from Dr. S. C. Sen, who originally inquired concerning this matter when he was in Canada attending the Commonwealth Conference last June. The Registrar was requested to communicate with Dr. Sen outlining the stand of this Executive, and advising that the C.M.A. Executive will be taking it under consideration at its next meeting.

2. General Medical Council of Great Britain Certificates

The Registrar reported that on February 8, 1950, he had sent a follow-up to his letter of November 21, 1949, inquiring whether the General Medical Council requires the certificate issued to registrants of this College who wish to become registered in Great Britain. No reply has been received to either of these letters.

3. Fidelity Bond

(Refer Liaison Committee).

4. Complaint Against Dr.

For information, the Registrar reported he had a verbal communication from Dr. that court action was taken, and payment of the whole bill plus costs was awarded in his favour.

5. Method of Student Admission to the Medical Faculty

The President read reply from President A. H. S. Gillson, to his letter of December 8th, advising that the question of student admission had been discussed at meetings of the Board of Governors and the whole question of admissions would be coming up in the near future for re-examination.

Dr. Walton advised he had attended a meeting of the Senate at which this problem had been discussed. The Committee of the Senate having to do with the selection of students had met previously, but unfortunately the C.P. & S. representative was not present. Apparently the committee sat very late and found the subject very difficult, particularly with regard to the legislature, since the University is dependent upon the government for financial support and its hands are tied. The following action of the committee was approved by the Senate:

That to qualify for registration in the 3rd year of the premedical course, a student must have completed all subjects of the first year satisfactorily and must have obtained an overall average of 65% on a full programme of the 2nd year, and satisfied the examiners in all subjects after the

April examinations. A student who obtains the overall average of the second year but has failed in one subject, must remove the failure by September, otherwise will not be allowed to enter third year. The object is that second year students applying for third year premed must have an all-over average of 65%. This figure was chosen because it has been the experience in the last several years that no one under 71% got into medicine, so 65% allowed a fair margin. In this way a great many students could be directed into more profitable channels, and have a better opportunity for a bachelor's degree. It is anticipated that there will be 70 or 80 third year premedical students applying for first year medicine, and that probably 50 of them will succeed in getting into medicine. This plan does not take into consideration any of the points requested by Council. Dr. Walton said that the President, Dr. Gillson, advised that the matter had been discussed very sympathetically and the committee had explored many methods of solving the difficulty, and had arrived at this particular measure. He remarked on the absence of the College representative, and specifically asked that our representative attend the next meeting of the Committee on Selection.

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Department of Health and Public Welfare
Comparisons Communicable Diseases — Manitoba (Whites and Indians)

DISEASES	1949		1948		Total	
	Feb. 26 to Mar. 25, '50	Jan. 29 to Feb. 29, '50	Feb. 27 to Mar. 26, '49	Jan. 30 to Feb. 26, '49	Jan. 1 to Mar. 25, '50	Jan. 2 to Mar. 26, '49
Anterior Poliomyelitis		2			2	
Chickenpox	130	170	147	137	472	444
Diphtheria		1	1	6	3	9
Diphtheria Carriers				2		2
Dysentery—Amoebic	1				1	
Dysentery—Bacillary	7	5	2	2	12	4
Erysipelas	7	6	5	1	16	9
Encephalitis						
Influenza	25	7	27	10	34	42
Measles	60	116	828	711	323	1889
Measles—German		1	2		1	7
Meningococcal Meningitis	2	3	4		7	5
Mumps	31	49	220	152	106	520
Ophthalmia Neonatorum						
Pneumonia—Lobar	30	14	28	11	48	44
Puerperal Fever	2			1	2	1
Scarlet Fever	41	65	6	14	134	36
Septic Sore Throat	4	4	5	4	13	9
Smallpox						
Tetanus						
Trachoma						
Tuberculosis	86	53	56	45	178	115
Typhoid Fever			3			3
Typhoid Paratyphoid						
Typhoid Carriers		1	1		1	1
Undulant Fever	3		3	2	3	5
Whooping Cough	17	21	26	26	43	56
Gonorrhoea	94	77	106	94	268	297
Syphilis	16	19	43	38	59	120
Diarrhoea and Enteritis, under 1 yr.	16	15	16	8	32	29

Four-Week Period, February 26th to March 25th, 1950

DISEASES (White Cases Only)	*779,000 Manitoba	*861,000 Saskatchewan	*3,825,000 Ontario	*2,962,000 Minnesota
Anterior Poliomyelitis		1	1	3
Diarrhoea and Enteritis	16			
Chickenpox	130	113	1055	
Diphtheria		1	4	6
Dysentery—Amoebic	1			
Dysentery—Bacillary	7	4	17	
Encephalitis			3	
Erysipelas	7	5	3	
Infectious Jaundice			73	
Influenza	25	7	1482	49
Measles	60	106	2331	447
Measles—German		140	2527	
Meningitis Meningococcal	2		4	9
Mumps	31	247	2376	
Pneumonia Lobar	30			
Puerperal Fever	2			
Scarlet Fever	41	10	173	115
Septic Sore Throat	4		27	20
Tuberculosis	86	35	78	74
Typhoid Fever		1	5	
Undulant Fever	3	1	2	31
Whooping Cough	17	3	161	117
Gonorrhoea	94		179	
Syphilis	16		110	

*Approximate population.

DEATHS FROM REPORTABLE DISEASES

Registrations Received from March 14th to April 11th, 1950

Urban — Cancer, 44; Pneumonia Lobar (108, 107, 109), 5; Pneumonia (other forms), 9; Tuberculosis, 7; Septicemia and Pyemia, 1; Gastro-enteritis, 1. Other deaths under 1 year, 22. Other deaths over 1 year, 199. Stillbirths, 23. Total, 244.

Rural — Cancer, 28; Influenza, 3; Measles, 1; Pneumonia Lobar (108, 107, 109), 4; Pneumonia (other forms), 14; Tuberculosis, 4; Gastro-enteritis, 2. Other deaths under 1 year, 15. Other deaths over 1 year, 154. Stillbirths, 15. Total, 184.

Indians — Cancer, 2; Influenza, 1; Pneumonia Lobar (108, 107, 109), 1; Pneumonia (other forms), 8; Tuberculosis, 2. Other deaths under 1 year, 2. Other deaths over 1 year, 4. Total, 6.

There is nothing very outstanding to report in this four-week period so I shall comment on immunization.

By the time this issue of the Review reaches you the roads should be in good shape and you should have your immunization clinics planned and ready to go if not already started.

The recent outbreak of smallpox in Glasgow, with six deaths already reported (one physician and three nurses) shows how necessary it is to have everyone vaccinated and revaccinated when necessary. We have been fortunate in the past ten years in Manitoba but smallpox could break out here and with the aeroplane for transportation people can easily travel from any part of the world to Canada within the incubation period of this disease. Diphtheria can be wiped out by the use of toxoid, and whooping cough can be decreased and rendered less fatal by pertussis vaccine.

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Winnipeg Medical Society Report of Nominating Committee

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Canadian Society of Laboratory Technologists

A Code of Ethics

Introduction

Medical Technology is one of the newer branches of the medical arts and sciences, but it has a worthy role to fulfil. The medical technologist, appreciative of the valuable work done by doctors, nurses and others, should endeavour to co-operate fully with them in the care and healing of the sick.

The following Code of Ethics has been the outgrowth of a desire to maintain the dignity and the high esteem of the profession of medical technology. It is a guide for the technologist in all the professional activities and relationships with patients, physicians, fellow technologists and others. The common sense of the technician, as well as the spirit of the Code, should provide guidance if situations arise which do not appear to be covered by the Code. In cases of doubt a technician can seek the advice of the Executive of the Canadian Society of Laboratory Technologists.

Code of Ethics*

1. The medical technologist shall look upon the profession of medical technology as one dedicated to the service of humanity; the medical technologist shall regard the welfare of the patient as of the highest importance, remembering that decisions of great importance may depend upon the accuracy of any report rendered.

2. The medical technologists shall work at all times under the supervision or direction of a pathologist or a qualified physician.

3. The medical technologist shall consider all laboratory reports on patients as confidential information to be communicated only to the physician, or to persons designated by the physician.

4. The medical technologist shall understand that the interpretation of laboratory reports and the diagnosis of disease are the responsibilities of the physician, not the medical technologist.

5. The medical technologist should not advise physicians or others regarding the treatment of disease.

6. If the medical technologist is requested to give special treatment, such as intravenous injection, it should be done only upon the direction or under the supervision of the attending physician.

7. The teaching of medical technology to students without the supervision of a qualified medical director is contrary to the spirit and principles of this Code.

8. Medical technologists shall endeavour to uphold and maintain the dignity and respect of their profession; medical technologists shall consider reliability, courtesy, patience, tact, efficiency and personal integrity as the fundamental attributes of a good medical technologist.

9. Medical technologists shall be loyal to their colleagues and shall recognize an obligation to support professional organizations by interest and active participation in so far as is possible.

10. Medical technologists shall continually endeavour to improve their skill and extend their knowledge by all means available and shall endeavour to keep in touch with the technical advances in the field of medical technology.

The above Code of Ethics was the work of a committee of the Canadian Society of Medical Technologists under the Chairmanship of Mr. Joseph Scott, R.T., of the Manitoba Sanatorium, Ninette, Man., and was published in the Canadian Journal of Medical Technology, December, 1949.

A. M. Costella, R.T., Publicity Chairman,
Manitoba Society of Medical Technologists.

* Reprinted by permission of the Canadian Journal of Medical Technology.

Canadian Association of Incurables

Information was requested by one of our members concerning the above organization, and was secured through the generous co-operation of Mr. Geo. S. Piers, Manager, Winnipeg Better Business Bureau Inc., as follows:

"The Canadian Association of Incurables was formed some three years ago, in May of 1947. It was formed to organize a workable body to enlist pensions for incurables by legislative means. Rt. Rev. H. R. Ragg, Bishop of Calgary, was named Honorary President, and Miss Eva Warden, 207 8th Avenue North West, Calgary, was elected President. There are representatives of the Association in Nova Scotia, Ontario, Alberta and Saskatchewan. As yet, no new appointment has been made for Manitoba.

No public subscriptions have been solicited, and there has been no authorization given for any such move. All monies have been raised by private individuals sending in funds to assist in the work. There is no membership fee in the organization."

MEDICAL LIBRARY

The University of Manitoba, Faculty of Medicine

Continuations

- Advances in internal medicine.
N.Y. Interscience. v. 2, 1947*.
- Alcoholism, collected papers of the Shadel Sanitarium.
Seattle, Wash. v. 1, 1948*.
- American diabetes association. Proceedings.
v. 7, 1947*.
- Biochemical preparations.
N.Y. Wiley. v. 1, 1949.
- Conference on biological anti-oxidants, Transactions.
N.Y. Josiah Macy, Jr. Fdn. 2nd Conf., 1947.
- Conference on blood clotting and allied problems.
N.Y. Josiah Macy, Jr. Fdn. 1st Conf., 1948.
- Conference on factors regulating blood pressure, Transactions.
N.Y. Josiah Macy, Jr. Fdn. 2nd Conf., 1948.
- Conference on liver injury, Transactions.
N. Y. Josiah Macy, Jr. Fdn., 1943*.
- Conference on metabolic aspects of convalescence, Transactions.
N.Y. Josiah Macy, Jr. Fdn. 11th, 1945*.
- Conference on problems of early infancy, Transactions.
N.Y. Josiah Macy, Jr. Fdn. 2nd, 1948.
- Methods in medical research.
Year Book Pub. v. 1, 1948*.
- U.S. Veterans Administration technical bulletin, Series 10.
Wash., D.C., Veterans admin., 1948, Jan. v. 2, 1949.
- Note: "*" after the year denotes that the library receives this journal regularly.

Reference—Not lent or restricted loan.

- American medical association. Council on pharmacy and chemistry.
A.M.A., 1948 and 1949.
- Beilstein, F. K. Beilstein's Handbuch der organischen chemie. 4 aufl. Die literatur bis I januar, 1910, umfassend Herausgegeben von der Deutschen chemischen gesellschaft, bearbeitet von Bernhard Prager und Paul Jacobson. Unter standiger metwirkung von Paul Schmidt und Dora Stern.
31 vols. in 53.
- Donner foundation (incorporated). Index to the literature of experimental cancer research, 1900-1935.
The Foundation, Phila., 1948. 1057 p.
- Mollendorff, W. von. Handbuch der mikroskopischen anatomie des menschen . . .
Springer, 1927-40; v. 1, pt. 1; v. 2 pt. 1; v. 3 pt. 1; v. 5, pt. 1; v. 6, pt. 3, pt. 2.

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Chairman, Social Committee.

- National research council. Handbook of scientific and technical societies and institutions of the United States and Canada. 5th ed.
Wash., D.C. The Council, 1948. 371 p.



Recent Accessions General List

- Berens, Conrad. The eye and its diseases, by 82 international authorities, edited by Conrad Berens.
Saunders, 1936. 1254 p.
- Bicknell, Franklin. The vitamins in medicine, by Franklin Bicknell and Frederick Prescott. 2nd ed.
Grune and Stratton, 1946. 916 p.
- Bishop, W. J. Medicine and science in postage stamps, by W. J. Bishop and N. M. Matheson. Harvey, 1948. 82 p.

Directory

Names and Phone Numbers of

Detailmen

Representing Review Advertisers in this issue, whose names are not listed under a business address.

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R. G. (Bud) Harman	592 648
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by Gladstone Hospital District No. 17 to locate in the Towns of Plumas and Langruth where Medical Nursing Units will be constructed. For further information write J. F. Rogers, Plumas, Man., G. F. Thordarson, Langruth, Man., or Norman I. Spalding, Secretary, Gladstone Hospital District No. 17, Gladstone, Man.

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Medical Doctor Wanted

The R. M. of Lakeview and the surrounding district requires a Medical Doctor. Hospital to be built this summer. Good Town with Public and High School. Retaining fee paid. For full particulars write J. E. Morrison, Secretary-Treasurer, Langruth, Man.

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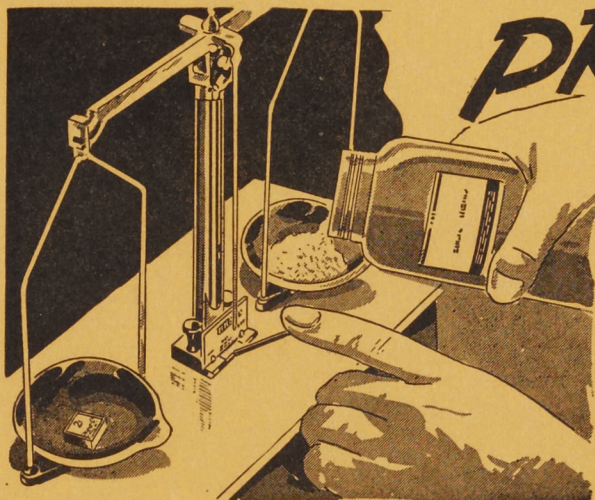
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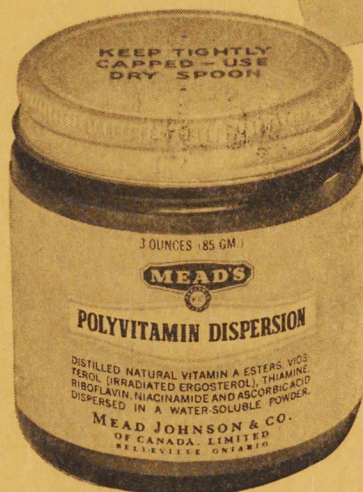
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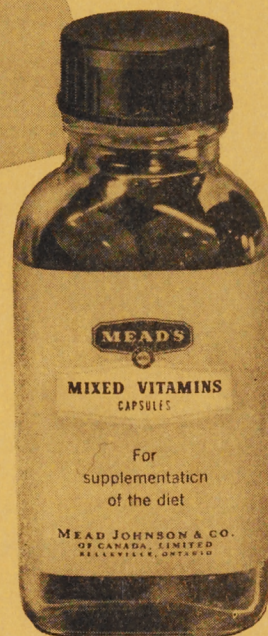


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